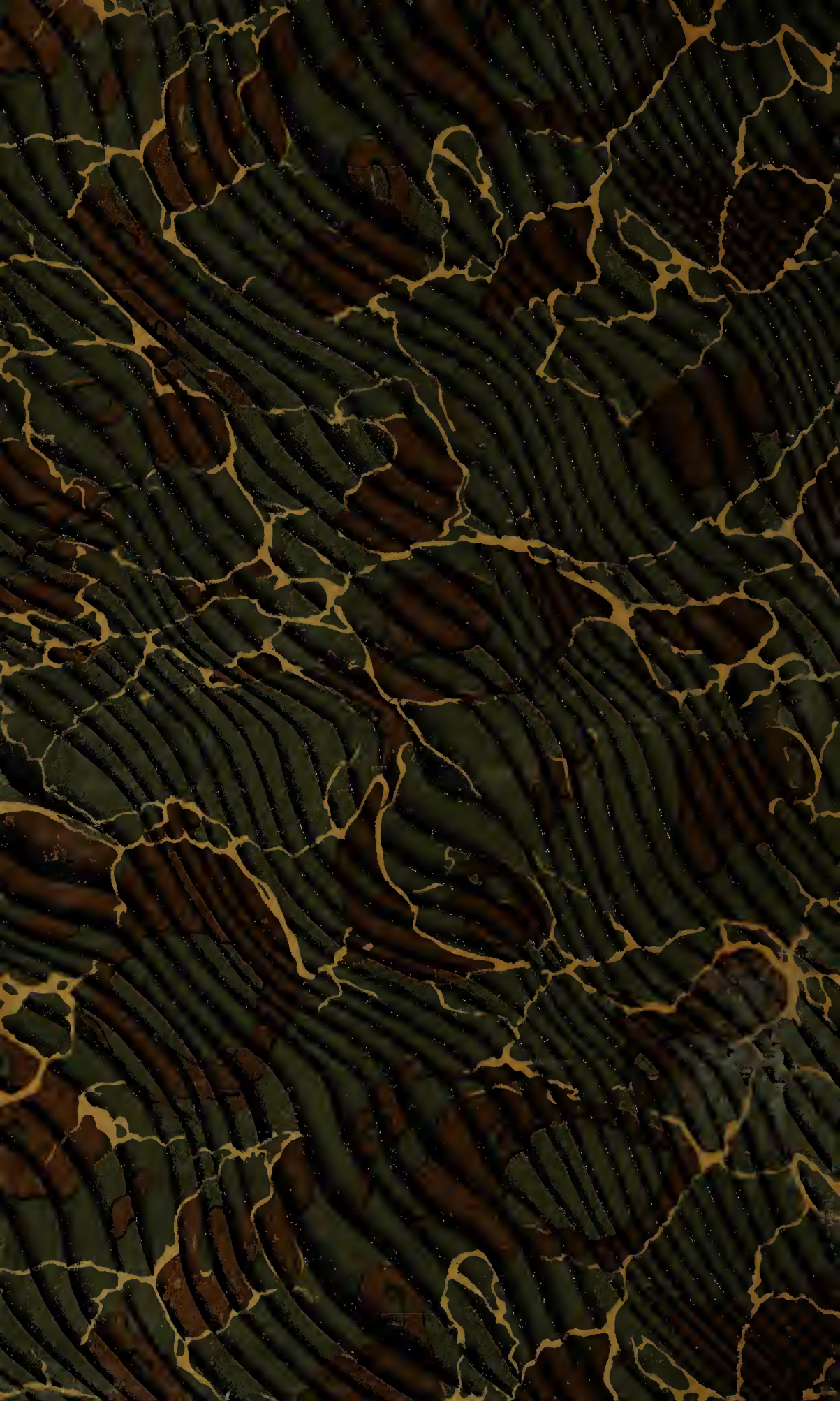

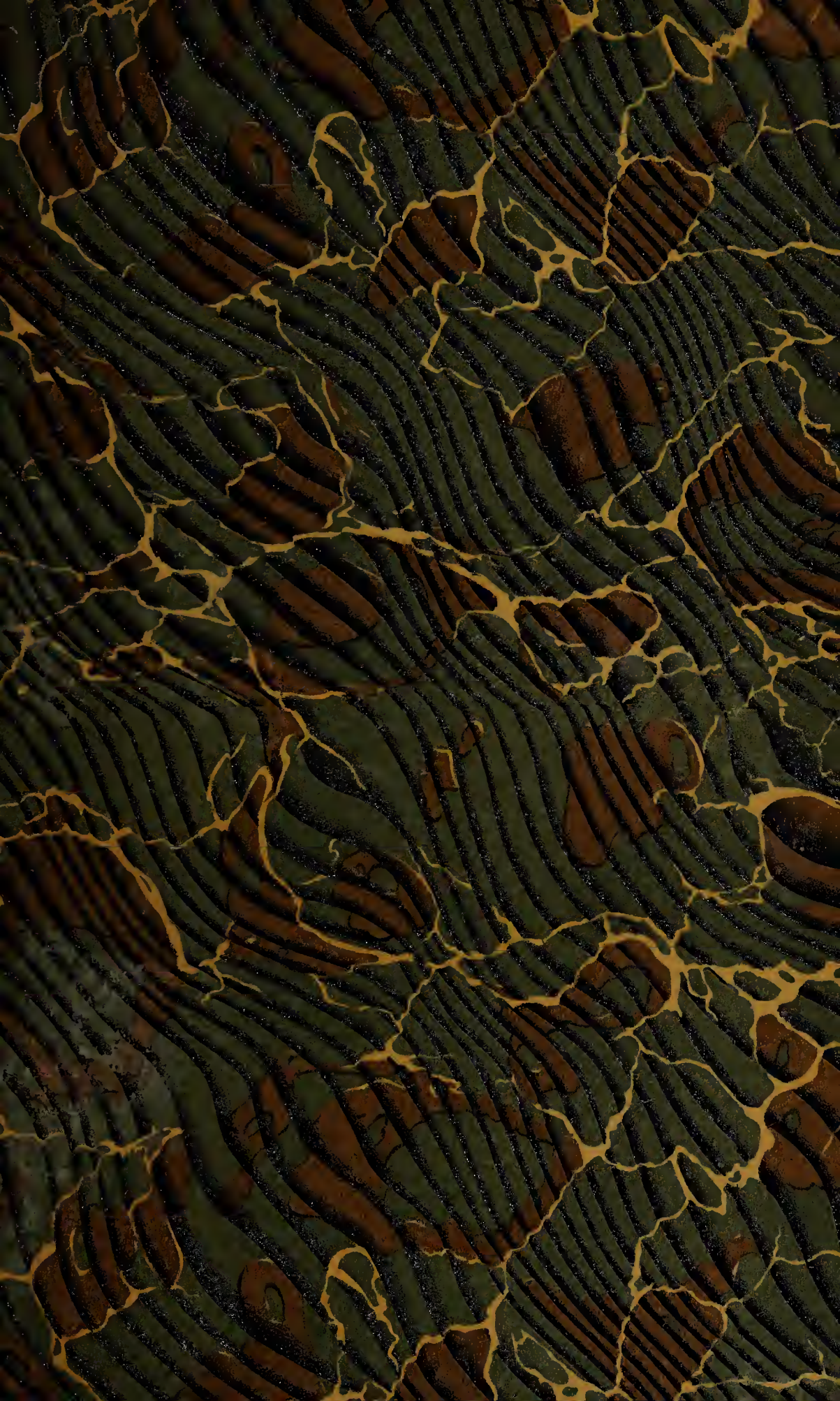

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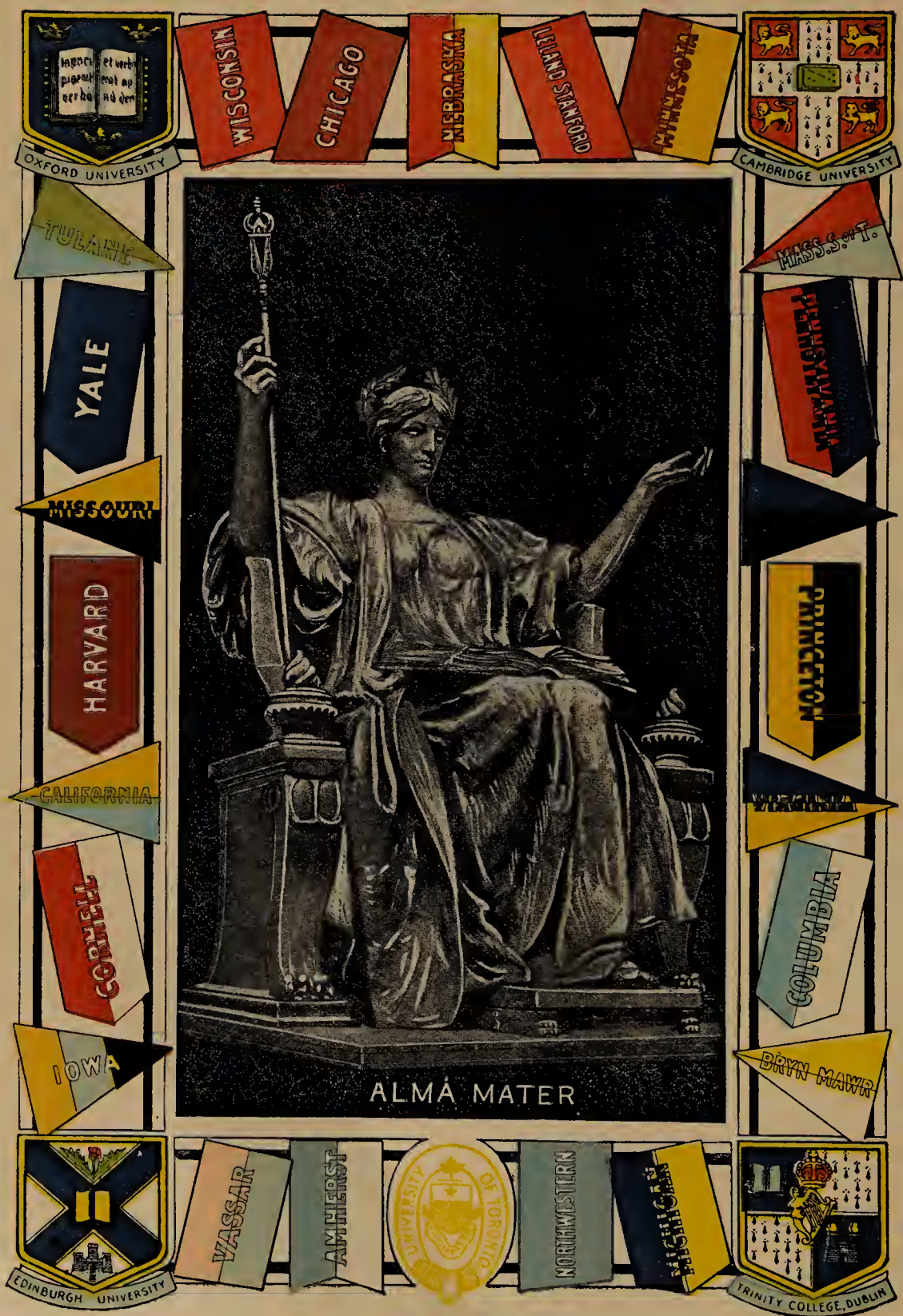
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RELATIONS OF MUNICIPAL ADMINISTRATION

BY ALBERT SHAW.

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THE century whose progress this Exposition celebrates has been for nothing else more remarkable than for its creation, not merely in this new world, but also in the old world, of the modern urban community. Speaking broadly, the cities of Great Britain and Germany in their present characteristics are as recent phenomena as the cities of this Louisiana Purchase region itself. Where five million people live under urban conditions as a part of a great community adjacent to New York Harbor, there were not one hundred thousand people when the Louisiana Purchase was consummated. London and Paris were ancient cities, with their splendors of old architecture and their pride of municipal and local tradition. But all that vast and complex development of the metropolis that London and Paris, Berlin and Vienna, have to deal with to-day, is of as late emergence as Buenos Ayres or Chicago. The modern city, whether of cosmopolitan character or merely commercial and industrial, is in all its larger aspects, for political and social purposes, the outgrowth of new conditions which began to make themselves powerfully effective only in the nineteenth century. Those conditions were brought about chiefly by

the utilization of steam power for manufacturing and for locomotion. In the economic world the predominant modern factor has been the creation of productive capital. Capital has aggregated itself principally in machines and instruments of transportation. The result has been that we live under material conditions that have become more profoundly transformed since the days of Napoleon and Jefferson than during any previous ten or twenty centuries of the world's history.

The new economic efficiency resulting from the creation and employment of productive capital has multiplied the population of all civilized countries. It has placed a premium upon intelligence, moreover, and has been the most potent agency in the banishment of popular ignorance. Its inevitable concomitant, moreover, has been the wide diffusion of the means of subsistence and the steady reduction of the domain of poverty.

Not only, however, has the modern system of economic production multiplied population and lifted the people up in the scale of physical well-being, but it has had a most striking and even sensational effect upon the re-grouping of population. It is this re-grouping that has created the modern conditions of industry and of transportation, and that has concentrated the steadily increasing surplus of the population in centers of manufacturing and trade.

The growth of capital and the average increase in wealth have created many new wants, which in turn have been supplied by the products of new forms of trade and industry. And these differentiations have in turn increased the town population and added to the complexity of town life.

The same conditions of industry and transportation which have created our modern cities and multiplied their population have had a striking though not revolutionary effect upon agriculture and the rural industries. They have tended

to bring about the opposite condition of a relative sparsity of rural population. This has been due to two principal facts: first, the introduction of machinery, which has made possible the cultivation of a given area of land by a smaller number of people; second, and more important, the new prevalence of extensive, as opposed to intensive, methods in agriculture, as a result of the opening up of vast areas of new and virgin soil through the construction of railways.

The competition of the new soils, with their access to markets, will continue for some time to come to keep the older lands depressed in value and subject to extensive rather than intensive methods of culture. So long as this condition remains, surplus population will continue to flow from the agricultural to the manufacturing neighborhoods, that is to say, from country to town. These tendencies can be amply illustrated by facts derived from every country within which Occidental civilization prevails. Even here in the states which have been built up upon the soil of the Louisiana Purchase,—in all the older parts of states like Missouri, Iowa, or Minnesota,—the agricultural population has been a fixed or slightly diminishing factor for two or three decades past, while the town population has been increasing by leaps and bounds.

The general statistics showing the growth of urban population in Europe and America are accessible and familiar, and it would be needless to cite them at this point in evidence of a tendency that could not have been different under existing conditions and that cannot be changed for a considerable time yet to come. In the older parts of the United States, as in Great Britain and the more highly developed industrial parts of the Continent of Europe, the urban population already far outnumbers the strictly rural population.

Modern municipal government, which forms the topic of our conference this afternoon, has to deal with a variety of

political and social problems that arise from this modern growth and radical re-grouping of population. These problems relate, on the one hand, to forms of organization,—that is, to the framework and method of the machinery of municipal government; and, on the other hand, to the objects and scope of the government of urban communities, that is to say, to the functions, political and social, that pertain to the municipal authority.

During the first half or even three quarters of this century of urban development now under consideration, the typical new industrial community was enormously hampered through the existence of evils that for a long time were not clearly understood to be curable. With the creation of factories and the concentration of industry in towns, rural hamlets were depopulated by the decay of old handicrafts, and a rustic population crowded into towns that were in no manner prepared to receive such accessions.

The results were painful and seemingly disastrous. There was overcrowding to an extent now almost incredible. So unwholesome were the surroundings that epidemics were the rule rather than the exception. Invalidism reduced the economic effectiveness of the workers; the average expectancy of life was very low; infant mortality was so sweeping that only a small percentage escaped; and thus, as a net result, the death-rate of every considerable urban community was to a marked extent higher than the birth-rate, and town life and industrial progress could only be maintained by the influx of surplus population from the country districts for fresh sacrifice on the altar of modern industrialism.

It is true enough that there had been an earlier phase of urban life which had also to some extent produced overcrowding and distress, and intramural life in wall cities in the Middle Ages had been frequently characterized by unwholesome conditions and decimating infections. But in

those days the overcrowding in its worst aspects was usually a temporary condition due to war or to disorders which obliged the country folk to seek shelter within fortified walls. Generally speaking, no European countries were very densely populated. The town dwellers were in a very small minority. Epidemics were regarded as divine visitations. Political economy, social science, and bacteriology had not entered the vital consciousness of men. And thus the conditions with which municipal activity in our time has been most deeply concerned were in those periods for the most part disregarded.

There were, to be sure, other aspects in which towns and their life were of much significance. The seaport towns were the centers of maritime trade, and many of them became rich and famous through traffic and merchandise. Witness the Hansa towns, Venice, and many another. Other cities, as centers of governing activity and as capitals of kings or of princes or grand dukes, had distinctions and splendors that have furnished them with a continuity of life very dignified and ennobling. Most or all of the old-time towns had their organizations or guilds of handicraftsmen, these in the aggregate constituting a free citizen or burgher body, which body in turn had secured from the reigning authority a charter or grant of communal privilege and corporate self-direction.

The municipal corporations thus formed almost invariably had their old town halls centrally placed on the market square and of imposing and beautiful civic architecture. The survival of great numbers of these old buildings as centers of a wholly new kind of municipal corporate activity helps not a little to carry the mind in imagination over the chasm that separates medieval from modern ways of life, thought, and action. But, although in the case of many towns there has been unbroken use for several centuries of town halls

and other appurtenances of the *Gemeinde,* or organized community, and although also in many cases there has been legally no break in the continuity of the incorporated municipal body, there has in reality come about a change not merely profound, but altogether revolutionary in the characteristics of town life and in the aims and methods of the municipal corporations themselves. It is in this sense that Vienna is new rather than old, and that the thriving urban communities of the Rhine Valley are of as recent development as those in the Mississippi Valley.

For a considerable time, as I have said, after the development of the factory system and the building of railroads had brought us fairly into the midst of present-day conditions,—in which population is everywhere forming in the new urban groups with which we are now concerned,—for a considerable time this re-grouping was regarded, even by those who extolled the new agencies of production and the new implements of exchange, as a thing deeply to be deplored by reason of attending ills that seemed beyond remedy. Those ills went farther than the physical maladies that invalided the workers and crowded the cemeteries. Town life seemed to foster every sort of crime and vice, and to threaten the swift decay of civic character and private virtue. Thus, looking into the future, one seemed to face the paradox that the very methods which were multiplying wealth, diffusing comfort, gradually shortening hours of brutalizing toil, and promising, theoretically at least, to emancipate and elevate the masses, were so working themselves out in practice as to devitalize and degenerate whole nations through the many-sided and incurable evils under conditions of life prevailing in the densely inhabited centers of new industry. This seeming paradox confused and alarmed many minds until a very recent period.

The paradox disappeared with the great discovery that,

after all, the evils of city life cannot only be abated, but so fully removed as to make conditions in populous towns both endurable and advantageous. The remedial measures have been worked out along many lines at the same time, all having to do with the growth of intelligence, the application of science, the improvement of the mechanism of public administration, and last, but not least, the achievements of modern commerce and industry in creating masses of wealth that can be drawn upon in a large way for the common welfare.

The recognition of the possibility of making city life positively desirable has in some places been tardy, and even now the political reformer and the social worker sometimes doubt and sometimes despair; but hope and confidence have everywhere triumphed, the best evidence of which is found in the dazzling array of public improvements and ameliorations of the general welfare that every important urban center of Europe and of America has accomplished within the past fifteen or twenty years. For every serious malady that continues to afflict any given community, the remedy has been discovered and successfully applied in one or another great town elsewhere under analogous conditions.

As respects the application of the different forms of remedy, we must, in a general way, assign the first place to British municipal life. The various phenomena of modern industrialism had an earlier and a more pronounced development in Great Britain than anywhere else. The rapid upbuilding and over-population of factory towns compelled the attention of English and Scotch reformers to the new conditions as requiring public treatment. It might be more logical to take up first the progress that has been made in the application of these remedies,—in other words to discuss the growth of municipal functions. But since I must also speak somewhat of reforms in municipal structure, it may

be well to allude first to those questions having to do with the forms of town government.

The reconstruction of English municipal government belongs to the reform period of seventy years ago. It was that same re-grouping of population which had by that time created the factory towns that had compelled the reform of representation in Parliament. The enfranchisement of the populous new boroughs for parliamentary purposes was attended by inquiries and discussions which showed the necessity of reforming the inner or municipal structure of these new communities. Some of these were without any form whatever of municipal government, while others were subject to serious abuses under outgrown medieval charters, which practically excluded the people themselves from a share in the control of their own local affairs.

The Municipal Government Act of 1835 is the great legal landmark in the development of modern town organization. Its lines were so broad and so simple that its essential features have sufficed for nearly three-quarters of a century, and will undoubtedly continue through the new century upon which we have entered. Many old forms and old terms were retained, and the chartered life of the county cities and the medieval boroughs seemed to go on without a shock or a break. Nevertheless, the Municipal Government Act brought new life into the old forms, while it cut off unjust privileges and monopolies, and enlarged the conception of the municipal corporation from a narrow, close, self-perpetuating body to a body made up of all the resident householders and occupiers.

Under this elastic common framework it has been possible from time to time to enlarge the municipal electorate as English life has grown more completely democratic. The central fact in the administration has been and will continue to be the popularly elected municipal council, sitting in one

chamber, acting as a board of directors for the conduct of municipal affairs, and carrying on the various departments of executive work under the supervision of standing committees.

Each working department is carried on under the direction of an employed expert head, whose tenure is presumably permanent, and who has in a large measure the authority to appoint and dismiss as well as to direct all the subordinates in his branch of the municipal service. The municipal or town council is a financial as well as an administrative body, and, under parliamentary authority and a certain measure of central supervision, it levies local rates and taxes, contracts interest-bearing loans, and in general carries on the work of municipal administration very much as the directors of a railway company, or of any other large industrial or financial enterprise, carry on the business with which they have been intrusted by the shareholders.

In this British system, the mayor is simply the presiding officer of the municipal council, is selected by the council itself, and is almost invariably one of its oldest members. By way of exception, the administration of the schools falls to a separately elected school board, and the care of the poor in like manner devolves upon a separately organized administrative group. In sound logic, there is no important reason why the schools and the department of public relief should not also come under the control of the municipal council, and the oversight of its standing committees. But in both instances there have been reasons of history and tradition for the separate control of these two functions.

Speaking in general, the enormous demands of an expanded and ever-improving municipal life have constantly added to the volume and the variety of the work intrusted to the British municipal councils. Yet these boards of directors have been fully equal to the new task imposed upon

them, and it will be generally agreed that from the standpoint of the framework or organization of municipal government, the British cities have no serious problems remaining to be solved. As science and the arts of civilized life point out new and better ways to promote the well-being of the people through municipal effort, the British town councils show themselves fully competent to initiate and to administer the new services.

Similar though less acute and less aggravated conditions of urban growth had required municipal reorganization in other countries. Those most important for our present purposes are the municipal codes of France and of Prussia. It was characteristic of the law-giving work of the Napoleonic period that it should have been at once drastic and of uniform and logical character. Making an exception of Paris, —as the English system has made an exception of London, —the French communal and municipal code of the early part of the nineteenth century created a system which was made applicable to the entire territory of France. The central feature of the system was the communal council. The number of members of the council varied in the ratio of population of the communes. As the rural commune grew into the urban community or municipality, its organization became more elaborate, but all upon a sliding-scale plan prescribed in the terms of a universally applicable statute.

In the long struggle between centralized authority on the one hand and the spirit of local self-government on the other, this municipal mechanism has sometimes been administered by the higher authorities through a system of central appointments, quite as bureaucratic as the institution of Russia itself. At other times, this mechanism has worked with something like English local freedom. In either case, however, its outer forms have changed very little.

The most important thing about this legislation was its

scientific character, its thoroughly modern aspect, and its well-nigh incredible achievements in sweeping away the anomalies which had grown up through the centuries. Thus, the Napoleonic administrative laws prepared the way for the municipal growth of the nineteenth century, and French urban life has, accordingly, developed under orderly forms with a system elastic enough to meet changes, and in accordance with the genius of modern French life.

Prussia was hardly less fortunate in the opening part of the last century in its great administrative reformers, which created a system for provincial, municipal, and local government that in the main has stood the test of time and has served for the exigencies of a wholly unforeseen growth of industry, population, and urban life. Saxony and the other German states, meanwhile, had also provided themselves with reformed systems of municipal and local government, different in details, but in a general way similar to the system of Prussia. Belgium, Spain, Italy, Switzerland, and the Latinic countries in general, followed sooner or later the model of France in shaping for themselves uniform codes of administrative law for the organization of local and municipal corporations. Austria and the eastern part of Europe have more generally followed the German model.

The keynote of the German system is to be found in a very highly organized, well-trained, non-political, permanent civil service. Every department of municipal administration is in the hands of expert functionaries, each man holding his place as a life career. At the head of the municipality is the burgomaster, himself the most highly trained administrative functionary of all. His position is wholly different from that of the non-salaried English citizen, who holds temporarily the honorary rank of Lord Mayor.

In like manner, the headship of the police department, of the legal department, of the education department, and of

the various services concerned with the supply of water, the maintenance of streets, the sewer system, the public cleansing, the administration of the health services, and so on, is vested in a permanent professional expert administrator under whom are many other permanent and specially trained experts, who hold their places for life on condition of efficiency and good behavior.

The burgomaster and the head officials of the principal departments constitute a body known as the council of magistrates. The citizenship of the community is represented in another body known as the *Gemeindesrath,* or common council. This council is popularly elected, and is a body of great authority. It sits in one chamber, but is elected upon a plan which recognizes the large taxpayers as entitled to much more consideration than those who pay small taxes. With the development of democracy, these property distinctions will probably be modified and in the course of time they may be abolished.

Meanwhile, however, admission to the trained civil service is open upon merit to the very humblest, and promotion in the civil and municipal services also goes without favor upon merit. The selection of the burgomaster and of the other chief functionaries, at those rare times when vacancies occur, devolves upon the elected council, which also has general budgetary power and coöperates with the magistrates' council in matters of municipal policy.

The permanence of the municipal service makes it possible to carry on with patience and unbroken effect every sort of public improvement and also renders it comparatively easy to imbue German municipal administration with the spirit of scientific progress. Thus, while from the point of view of French, British, or American democracy, German municipal government is unpopular and reactionary, it is, nevertheless, in the very forefront of progress as respects the ap-

plication of scientific knowledge to the public services. It is a municipal government whose standards are prescribed by the bacteriologist, the electrical and civil engineer, the sociologist, the financial and legal expert, the trained architect, the botanist, and the man of technical equipment in a hundred different directions.

It is at least open to question whether or not a community may not be regarded as governing itself as truly where its civil service is perfectly organized and dominated by scientific and humane ideas, though its electorate be restricted and non-democratic, as a community which, like those of the United States, throws its electorate open without conditions even to the vagrant, but which denies itself the benefit of a thoroughly efficient and highly enlightened civil service.

The United States is the only country which has not worked out for itself a fairly uniform system of municipal government. There are in this country to-day more varieties, not merely in the details of organization, but in the fundamental features of the framework of municipal government, than in all the countries of Europe taken together, from Scotland to Bulgaria and Greece.

I cannot deny the opinion that it has been unfortunate for the best development of civilized life in American cities that there had not been devised before the middle of the nineteenth century some simple standard system of organization for American municipal corporations. Along with many advantages, our federal system has had some grave disadvantages. To that system undoubtedly must be attributed many of our difficulties in dealing with the city problem, and especially those difficulties that arise from defective legislation.

Our cities are scattered through a large number of states and derive their forms of administration and their various powers from as many legislatures. Some of the states have

worked out uniform systems, while others have followed the practice of granting individual charters to each incorporated town or city. Almost every city in the country can show an experience of charter change, revision, and renewal, so bewildering and so capricious in frequency of repeal and in violence of sudden resort from one device to another, totally different, that it becomes more difficult in many instances to follow the structural changes of government in a moderate-sized American town than to grasp the whole administrative history of municipal corporations for England or for France.

In theory, the municipal corporations are minor divisions or entities of the state, but in many cases their relative importance is so great that they are not held in proper subordination. Under these circumstances the state lacks power to legislate wisely and on stable and permanent lines for its growing and assertive municipalities. On the one hand, the great town disturbs the even tenor of the life of the commonwealth; on the other hand, the rural commonwealth fails to understand the needs of the great town, and attempts in futile and vexatious ways to hamper it and circumscribe its powers.

Thus to meet local or temporary exigencies, rather than to serve the abiding ends of good administration, there is constant meddling with charters and change of method and system. All American cities, however, have some form of an elective municipal council. In a few instances these councils have power almost as complete as in England, in most others much less power, and so on to the vanishing-point. Nearly all American cities have been at one time or another the complete victims of an attempt to separate the so-called legislative from the executive function, in oversight of the fact that practically the whole work of a municipal corporation is administrative, and that the enactment of by-laws is a very minor detail.

Practically everywhere throughout the United States the cities provide themselves with a mayor elected by the whole voting body. In many cities the mayor has very small actual power; in many others he appoints and removes all heads of departments, controls the police system, and runs a sort of periodic autocracy. In many American cities, the different departments of administration are farmed out to boards and commissions. In some places these boards are elected by the people, in others they are appointed by the mayor. In still others they are chosen by the municipal council. Yet more frequently they come into being through ingenious combinations of all these methods.

It is useless to try to generalize, or to attempt, for purposes of description, to work out of all our varying forms some average sort of arrangement that we might call the American system. Yet some creditable attempts have been made in this direction, and a body of excellent theoretical, legal, and practical students of the subject, organized as the National Municipal League, has worked out a so-called model charter, which is having no slight degree of influence upon charter-framers and legislatures, as from year to year they go on prosecuting this ceaseless American industry of making and unmaking municipal charters.

Most municipal reformers in the United States have, however, openly or tacitly agreed to give over for the present all very strenuous attempts to secure their ideals in the matter of charters. They are working, rather, for good practical results under any sort of mechanism, however complicated or arbitrary. They recognize the fact, nevertheless, that the innumerable so-called checks and balances and the baffling division and dispersion of authority, far from preventing misgovernment, afford the wrong-doers their best opportunities.

It has thus far proved impossible to persuade the charter-

makers that the safest and best plan is to abolish nine tenths of the machinery and provide a simple, direct way by which cities may exercise self-government as respects the range of power granted them by the state.

The earlier powers to be exercised within municipal limits are those of a negative and purely protective sort. The police authority is everywhere recognized as belonging to the higher sovereignty of the state. It has, however, in nearly all countries been found convenient to turn over to the municipal authorities the organization and control of the police work. An exception has generally been made of the great metropolitan cities, in which the whole state has so much concern, that it makes direct exercise of the police authority, and declines to admit the municipal corporation to any share in the maintenance of public order. In some countries, as in England, police standards and methods are national, while organization and ordinary control are municipal. In such cases there is national inspection, and the higher government pays some part of the cost of maintenance.

In the United States many of the most serious disturbances of municipal life grow out of the difficulty of defining properly the sphere of the police administration, and the further difficulty of securing permanent and non-partisan direction. It is highly important that a sharp distinction be noted between the evils in American municipal life that associate themselves with the conduct of the police department and the other very different problems of municipal government that have to do with the raising and expenditure of the corporate revenue, and the management of water-supply, drainage systems, cleansing services, streets, parks, schools, and various other lines of municipal activity. While it is evident that inefficient or corrupt police administration has a tendency to infect and corrupt other departments, it has often been strikingly true that alongside of scandalously bad po-

lice administration there has been found fiscal integrity and efficient management of the health services, the schools, and various public works.

Upon municipal corporations in general, it may be said that the state has devolved not merely the ordinary protection of life and property with which the police department is charged, and such special forms of protection as are illustrated in the fire departments, but also the newer forms of service that relate to the protection of the public health, the older sort of regulation that relates to the preservation of public morals, and the local enforcement of a variety of general statutes. For all these purposes the municipality is in fact the local agent of the state. There is nothing new in the legal or theoretical nature of any of these functions, but there is a vast deal that is new in the manner in which the functions are exercised.

Thus the enormous development of public lighting grows out of the primitive function of the night watchman. The modern development of water-supply is essentially a health protective service. The same thing may be said of the sewer system, the cleansing of the streets, and the removal and disposal of garbage and waste. All these are public functions in the highest sense. In the opinion of most municipal authorities, the question whether or not street-illumination, water-supply, sewers and drainage, street-cleaning, and garbage removal should be exercised as public or as private functions is no longer open to discussion. None of these services can be properly rendered for private profit. They relate too essentially to the public welfare. Fortunately, in all these matters, modern municipal life is making an unexpectedly rapid and fortunate progress, with results that are shown directly in the reduction of death-rates, and indirectly in a score of other ways.

Forty or fifty years ago, as I have already said, epidemics

were frequent in most cities of Europe and America. Now they are of rare occurrence. The cholera, at Hamburg, eleven years ago, resulted in making German municipal government more than ever a matter for the bacteriologist and the high sanitary and engineering authorities. The best American cities are advancing to these German and British standards.

Nothing else has such far-reaching importance in the more recent life of cities in Great Britain and Europe, and even more obviously in America, as the physical changes due to electric transit and the upbuilding of suburban zones. Within the past ten years the extent of electric street railways in America has increased many-fold. This movement is doing a hundred times more to relieve the congestion of population in cities and to make possible an effectual dealing with the evils of overcrowding than has been accomplished by the direct application of remedies to slum conditions.

Fifteen or twenty years ago the word "slum" was of constant recurrence in any discussion of the problems of municipal life. Every city, even the small ones, had its area of overcrowding, of unsanitary conditions, of great infant mortality, of epidemic tendency, of criminal resort, and of degeneracy and decadence. Most people believed that such slum areas were inevitable and could not be wiped out. It was observed that the drastic clearing-out of one slum spot was followed by the rapid creation of another. There has come about, however, a complete change of opinion on this subject. The rapid tide of the better class of families to new and sanitary districts, opened up by trolley lines, is so relieving the pressure upon old residence properties in central districts that demolition can proceed with advantage, and rules against overcrowding can be enforced with good results.

Along with this tendency to annex the suburbs and expand the municipal area are to be observed many hopeful accompanying tendencies. One finds immense progress in the art of street-making. Municipal landscape art, as shown in open squares and in smaller and greater parks, has advanced with magnificent progress since Mr. Olmsted and his associates laid out Central Park in New York. Water-supply, sewers, and all that belongs to the functions of good municipal housekeeping are no longer in doubt. With some mistakes, with some extravagance, and with some reaction, the main victory has, nevertheless, been won all along this line.

The people have grasped the conception of orderliness, beauty, and sanitary safety in town life, and they will work these ideals out without fail in all modern industrial countries where there is prosperity enough to keep the forces of civilization alive and energetic. Thus the opportunities and conditions of the average working-man or mechanic dwelling in our cities have been completely revolutionized within ten or twenty years. The plain man may educate his children in admirable free schools under municipal control. The schools have learned to adapt themselves to the needs of the working-man's family, so that they no longer *un*fit for practical life, but on the contrary contribute to the ability of the boy or the girl to earn a living in his own town, as well as to be a good citizen and an intelligent member of society. The working-man has the best of water, the assurance of good health conditions, admirable opportunities for recreation and instructive amusement, great public libraries and reading-rooms made accessible to him, and a hundred advantages scarcely dreamed of fifty years ago. Thus evil has been turned into good, and where once it was seemingly disastrous for men to be living together under urban conditions in modern industrial communities,

it is now, for the great majority, a source of positive and unquestioned advantage.

I am not unduly optimistic. I do not for a moment ignore the many and grave difficulties that beset the work of municipal government and the task of social reform in the industrial centers. What I hold is that the problems are now defined, the remedies are fairly understood, and the work can progress with good courage. We have, in the United States, made enormous progress since, more than twenty years ago, Mr. Bryce made the studies which are embodied in the chapters of his *American Commonwealth* that relate to our city life. In some respects the very best illustrations of the triumphs and the difficulties of American urban life are afforded by this great city of St. Louis that has grown up as the chief center of the states formed out of the Louisiana Purchase territory. There have been evils and scandals in its municipal governmental career that have of late been widely advertised to the world. I have, on the other hand, known something for years past of other phases of its municipal life, and I must assert that, in the main, it stands not only as a creditable, but as a brilliant, example of modern municipal progress. It has at least managed to make a comfortable and a beautiful dwelling-place for its inhabitants, and to provide for them those facilities that contribute to the safety and enjoyment of life.

Here, as elsewhere in America, just now,—as in Chicago, San Francisco, New York, Boston, Philadelphia, and many another city,—the most important phase of municipal life is the struggle for a higher type of civic virtue. This is coming about in the gradual detachment of what we may call "municipal politics" from the domination of the national and the state politics, which have no proper place in the direction of the corporate activities of towns and cities.

In spite of the difficulties that I have mentioned, there

is some tendency to improvement in the structure of municipal government. There is almost revolutionary improvement and progress in the application of American prosperity and advanced material civilization to the appointments of town life. Finally, there is also unquestionable progress in the direction of civic honesty. It need not be said that with the massing of population in the urban centers it becomes almost a question of life or death for the state itself that the citizenship of the populous communities be at least of as high a grade and standard, as fit for the exercise of the privileges of democracy, as the citizenship of the rural neighborhoods. But for the rapidity with which we have received and enfranchised masses of non-English-speaking immigrants who have for the most part taken up their homes in our cities, I believe we should already have brought the standards of civic life in our towns up to the average of the country at large. As to the future, I have no doubts at all upon this score.

In British, German, and other European industrial centers, the greatest difficulties that now have to be faced grow out of the poverty and degradation of a considerable percentage of the urban population. The remedies for this condition are not exclusively in the hands of municipal authorities. They must be worked out with the progress of economic conditions, and the gradual diffusion of realized wealth.

From the standpoint of the social and political philosopher, as well as of the political economist, it must never be forgotten that the modern city is the creation of those very industrial conditions that have created the whole mass of modern wealth, that have elevated the standards of life, and that are certainly destined in their turn to improve and finally to transform the cities which their own instrumentalities have created.

STYLE IN MUSICAL ART[1]

BY SIR CHARLES H. H. PARRY

[Sir Charles Hubert Hastings Parry, Professor of Music, University of Oxford, since 1899; Mus. Doc., LL.D. b. in 1848; educated at Eton and Exeter College, Oxford. Director Royal College of Music, 1894. Among his compositions are *Music to the "Birds" and "Frogs" of Aristophanes; Judith*, an oratorio; *Ode for St. Cecilia's Day; The Lotus Eaters; Job; King Saul; Magnificat; Song of Darkness and Light.* Author of *Studies of Great Composers; Evolution of the Art of Music; Summary of Musical History;* and *Music of the Seventeenth Century.*]

It must be confessed that one can hardly think of style in man or nature or art without being importunately haunted by a familiar French proposition, which conveys to the superficial mind the view that manner counts for more than man. No doubt the familiar *'Le style c'est l'homme'* compares unfavorably with the more ancient saying 'By their fruits ye shall know them,' but it is probable that it was not intended to attribute so much importance to externals as the aptitude of men for misunderstanding things which are too tersely stated leads them to infer. There are thousands of things by which a man's nature may be gauged besides style. Everything that is part of him may in some sense be a gauge of him. Just as a great naturalist has been said to be able to reconstruct some unknown animal from a single bone, men say you can tell a man's nature by the shape of his nose or his hand, or the expression of his mouth, by his walk, by the tone of his voice. Everything may serve the quick-witted as a basis of inference, though all may not be equally trustworthy. Style is mainly an external attribute—a means to an end, and in no wise comparable to actual qualities of character or action in man, or the thought embodied

[1] This lecture was delivered in the regular Oxford University course.

in what is said in poetry, or the idea embodied in art. But it is an essential. It is present in everything which has real vitality, and in every moment of art's existence. And as it is infinitely variable in relation to the conditions in which artistic work is presented, it serves as a very comprehensive means of inferring the genuineness either of man or of artistic work.

Differences of style are the outcome of the instinct for adaptation. In art the most perfect style is that which is most perfectly adapted to the conditions of presentment. Many different factors minister to its development. For instance, material counts for a great deal. If a work has to be executed in stone the particular qualities of the material necessitate a style of art different from that of works executed in iron. The effects which can aptly be produced in one material are quite different from those which can be produced in another. The result of trying to imitate effects which can be produced in one kind of material in another which has quite different properties is either stupid or vulgar in proportion to the dexterity of the worker; and style is either gratifying or repulsive in proportion to its just relation to its conditions. It is the same in life as in art. To take an extreme case: the style of an untutored savage in a very hot climate might be quite picturesque and appropriate in his own country, but if any ill-regulated being were to adopt it in the streets of a cool and civilized city he would probably have to be suppressed. There is a technique of life as well as of art, and the style of every section of society varies in accordance with its conditions; and the outcome of attempts to adopt a style belonging to one branch of society in a branch of society whose conditions of life are altogether different is vulgarity. When we come to apply these considerations to music we find circumstances of the same nature. In music the simplest parallel to the differ-

ences of material in plastic arts lies in the varieties of means by which music is to be performed and made appreciable to sense. All music which is worthy of the name must in the nature of things be written to be performed by instruments or voices. And they all have their particular idiosyncrasies. Organs have their special aptitudes and their special inaptitudes; and the music which is written for them, if it is to attain to any degree of artistic perfection, must be based upon the recognition of them. Violins have their special powers of expression and effect, and their limitations; horns have theirs, and trombones theirs. Voices can do certain things that instruments cannot do, and all instruments can do things which voices cannot do. There is, as it were, a dialect appropriate to each instrument and each class of voice; and there are even ideas which can be better expressed in one dialect than another; and the employment of any particular means of utterance, whether violins, pianofortes, organs, hautboys, bassoons, voices, harps or trumpets is only justified when they are used for passages which can exactly be given with fullest effect by them.

If there is a style for each individual member of the orchestra, even more essentially is there a style for the orchestra as a whole. It is capable of almost unlimited complexities of rhythm and figure, of varieties of color which are countless. In power of tone it is tremendous, in depth of expression infinite. To venture to put such an engine of power into motion at all seems to be courting responsibility. And to put it into motion to utter things which would be quite adequately expressed by a pianoforte or a set of voices is like calling the House of Lords together to cook a homely omelet. People do not hear orchestral music often enough to realize what the highest instrumental style is. But any one who has a sense of the adequate adaptation of technique to material or means of performance revolts at choral music

written in the style of a brass band, organ music which is mere pianoforte music, or orchestral music in disguise. But the hurry and lack of concentration of modern life, and the habit of producing for a public which has neither discrimination nor education, and the habit of playing such a vast amount of arrangements all tend to dull people's sense of the essential meaning of style, and to make composers miss the higher artistic opportunities in the urgent desire to gratify ephemeral whims.

But style is far from being regulated only by the essential peculiarities of the instruments by which the music is to be performed. Every detail in the situation for which the music is intended, the attitude of mind to which it is to appeal, and the circumstances under which it is to be performed have bearing upon the methods suitable to be employed, and therefore upon the style. When music is intended for domestic consumption it entails a totally different style from that which would be suited to some great public function. It entails its being pure enough to live with, and rich enough to sustain constant interest, and a level of thought more near to the contemplative than the active. While the music of the public function must be stirring and brilliant, direct and forcible, and it attains its highest standard when it is elevating and noble in diction. Even in characteristic deteriorations the difference of style peeps out. The risks of the domestic style are sentimentality and languorous and unhealthy sensuosity, and the risk of the public-rejoicing style is blatant vulgarity. Of style in relation to attitude of mind and mood that of the old Church music is probably most characteristic. Its contemplative and devotional character, its quietude and inwardness, were partly owing to the limited development of artistic technique before the latter part of the sixteenth century, and to the fact that no other style was sufficiently developed to distract the

minds of composers. The effect of the circumstances and the attitude of submission to the authority of the Church was to produce a style so subtly consistent and so perfectly regulated that hardly anything in the range of modern art can compare with it. The instant true secular music came into being it was doomed. The secular phraseology could not be kept out of it, and in no great space of time submerged the devotional element, and the hybrid which resulted was of the most mixed quality. Sometimes even divinely beautiful, and at others grossly repulsive. Sometimes vibrating with human love and tenderness, and sometimes redolent of the most nauseous vulgarities of the opera. But in either case the style was mainly governed by the attitude of mind to which the composers intended to appeal.

Conspicuous difference of style is induced by different conditions of presentment. This is obviously the case in respect of music which is associated with words, and music intended to be performed without them. In music associated with words it is absolutely inevitable that the mood and expression of phrase and figure and melody and harmony, and even of form, must be in close and intimate relation with the words. The more perfect the instinct of the composer for the musical equivalents of the sentiments expressed by the words, the more perfect will be the style; and the more perfect the invention which can dispose of the ingredients in an effective and original manner, the more complete the work of art. The composer has the moods and details of expression supplied him, and the hearers understand the music through its relation to the words. But in music that is intended to be performed without words the composer is himself answerable for the moods he presents, and he has to find inherent justification for every bar he writes in some artistic, intellectual, emotional, or aesthetic principle. To write music for instruments in the style of

vocal music is doubly fatuous, for it is not only inadequate on the grounds that instruments can do so much more than voices, but that the absence of words leaves it entirely without ostensible reason for existence, when there is little or no intrinsic interest in the workmanship.

Even in the various departments of word-wed and wordless music there are infinite shades of variety of style. The music of the theatre absolutely demands a method and style different from that appropriate to vocal music of the concert room, and from the style of the domestic art song. The dramatic music of the theatre gains both advantages and disadvantages from its associations with scenery and action. For, while the mind is distracted in one respect, and pays no attention to artistic qualities which would be prominent in a quartet or a symphony, it is helped in others which would be out of place in instrumental music. The listener would probably miss the development of figures and the subtleties of abstract design if he attended to the drama, but would be quick to feel the intention and purpose of progressions, harmonies, resolutions, and successions of keys which would be unintelligible without the words, but become vividly effective from the situations with which they are associated and the development of passion which they portray. In songs which are not intended for the theatre, the qualities and methods used in quartets and sonatas are much more appropriate, because the mind is less distracted from the music itself, and has more attention to spare for interesting constructive features and subtleties of detail. In the just apportionment of style for emotional and dramatic effects in theatrical music and domestic music the resources are so different that they can hardly be judged on the same footing. People who judge of what is dramatic in the light of what is histrionic would hesitate to call anything dramatic which was in the true style of a solo song. But indeed, there is a

just way of expressing tragedy, pathos, despair in the style suited to solo song, and a different way of expressing it for the stage. The opportunities of the one are more analytical and subtle, and of the other more direct and sensational. It is by no means essential that a thing shall be in histrionic style in order to justify a claim to being dramatic. The histrionic style is a specialty which I hope to consider more in detail another time. But so is the song style—and both are limited by the more delicate instinct of highly organized artistic beings in such a way that much which would be admirable in one style is positively vulgar in the other.

But if the provinces of two different kinds of vocal music are so strongly distinct, the differences between the style and even the material of operatic music and pure instrumental music are more striking still. The differences of method are so pronounced that the histrionic and the absolute seem to represent distinct territories in the musical art; and most people who call themselves musical live almost entirely in one of them, and make little effort to appreciate the good features of the other. It cannot be said that either party has all the right on their side. It is quite true that people who are very fond of the opera are most frequently not musical at all in any sense. But there are a good many who really take it from the artistic point of view and understand it, and are perfectly justified in objecting to operas written in the style and with the methods belonging to instrumental music.

On the other hand, it may fairly be said that men of high artistic taste and perception, habituated to the purer style of absolute instrumental music, are not altogether liberal in their judgment of operatic music, and are not sufficiently ready to admit what is admirably devised for its conditions. They are apt to fall into the misconception that because certain principles of form and procedure are almost indispensable to instrumental music, any music in which they do not

find them is necessarily bad. In this connection it is impossible not to think of the violent antipathy which Wagner's style produced in men of intelligence and cultivated taste. His mature style was certainly as strongly different from that of composers of instrumental music as it is possible to conceive. It was the product of a disposition more essentially dramatic and poetically imaginative than musical. It repelled musicians who appreciated highly the time-honored methods of art which had been consecrated by the greatest masters of instrumental music, because the composer aimed, with an instinct of genius never before shown in such a degree, at a style which was essentially adapted to the conditions of the stage; with all the distractions of the acting, the scenic display, and the interest of the drama. It repelled, because the composer in the instinctive search after a new ideal of style disregarded all the conventions which had grown up in connection with the only branches of art which had hitherto been really mastered. It disregarded the classical rules of resolution of discords, progressions of chords, conventions of design and clearness of tonality. Yet to the great mass of cultivated people his ideal of style proved convincing. He at all events did not make the mistake of supposing that his principles of procedure were applicable to instrumental music of any kind. That mistake was left to his imitators.

The unsuitableness of the operatic style for instrumental music is obvious to all people of taste and artistic intelligence; but in truth the employment of the style which has been developed for pure instrumental music in operas is just as futile. In both cases it is the employment of resources which have been developed for one group of conditions in conditions to which they are unsuited. And there is no reason why operatic music should not be just as well provided with beauty and interest of detail as instrumental

music. Coarseness and commonness of texture are not confined to operatic music, though found there more frequently than in other branches of art. There is plenty of flabby and conventional instrumental music, which the world has gladly let drop and be forgotten. The difference of style which is entailed by the bestowal of loving care on details or indifference to them is more a question of disposition than a necessary basis of contrast between operatic art and instrumental art. The difference is illustrated in the widest sense by the broad distinctions between the tastes of the southern and the northern races. The southern races seem to delight in what is voluptuous, and in the elements of art which appeal to sense. They set no great store on purity, and enjoy their art with indifferent promiscuity rather than with love and reverence. The northern races treat their art with more respect, and look for qualities of virginal purity upon which they can dwell with constant loving contemplation. The southerns delight in broad sweeping effects, in which details are of little consequence. The northerns, without losing anything in general imposing effect, love to make every part of their artistic work vital and interesting, so that nowhere shall commonness and the insincerity of indolence or convention be visible. The effect is shown in a very interesting phase by the story of organ music in the seventeenth and eighteenth centuries. The Italians set the ball rolling in grand style with the help of many noble composers, of whom Frescobaldi was chief. But deterioration soon set in when a facile style was adopted, in which the details were merely conventional formulas; and the southern school of organists came to worse than nothing. While the northern organists, putting their whole souls into every part of their work, rose higher and higher; and attained first to the luxury of fancy and richness of appropriate detail which is shown in the works of Buxtehude, and ultimately to the

supreme ideal of the highest possibilities of art in the organ style in the work of J. S. Bach. The work carried out with real love and devotion has a higher and more permanent interest than work done under a more vague and uncritical impulse. The difference in such respects between the southern and the northern attitude is well illustrated in the respective styles of Handel and Bach. Bach's style was evolved in the intense devotion to personal ideals. Though he studied all schools of art and absorbed from all quarters such principles as were available for his peculiar artistic disposition, he always worked with the true northern bias to present his thoughts with perfection of detail as well as of general impression; and the subordinate features of his work are therefore in the highest degree interesting and rich. While Handel, following general public taste, which was mainly Italian, aimed at greatness of general impression, at what have been described as cosmic effects, and was often voluptuous in melody and conventional in phraseology, and presents much less interest in the details. Handel holds his own by sheer weight of greatness, but the works of a great number of composers who work on the same lines and in the same style have deservedly fallen into complete oblivion.

Qualities of style are eminently illustrative of sincerity of intention. The periods in which men wrote half-heartedly, with no genuine personal intensity, prove in the end to be styleless. If the style is not distinctive, the product generally proves to be intrinsically worthless. The truly great individual masters of style are such as we know to have been passionately in earnest, and deeply absorbed in the endeavor to attain an ideally perfect presentation of their thoughts. Beethoven and Bach, who had the most consistent degree of personal style, attained to it by infinite labor in pruning, rewriting, remodeling, and constant self-criticism. The com-

posers who had phenomenal facility are by no means those whose style is most individual. Handel was individual in his greatness, but not in the manner of his diction. Mozart was pre-eminent in his sense of beauty, not in the originality of his manner. The most striking and persistent qualities are such as belong to the adamantine natures, not to those which are most malleable. The rugged manner of Carlyle cost himself and his friends untold misery; and the powerfully distinctive style of Brahms must have cost him extraordinary concentration of faculty, even if he mended and pruned less than Bach and Beethoven. It must be admitted that perfect consistency in style is not to be hoped for. Nothing is absolute in human affairs, and though the greatest men in their greatest moments employ the style which enables them to cover the most ground—in other words, such as is most perfectly adapted to the conditions of presentment—even the greatest are sometimes forced by circumstances to employ traits which are drawn from alien sources. A great deal of the music in Mozart's operas is not essentially either histrionic or operatic, but an outcome of the traditions of the conventional Italian operatic entertainment of the early part of the eighteenth century, which made scarcely any pretense of being a dramatic or a histrionic product at all. Conversely we come across passages with an operatic flavor occasionally in Beethoven's instrumental compositions. But the greater men are less frequently betrayed into such bewilderments than those who take their responsibilities lightly. At the same time there are infinite shades of variety of style from the highest to the lowest. As there is a style for the greatest things, so there is for the least. There is a style for the music hall, which of its kind may be good and consistent, as well as for the grandest works of art. A great deal of the low and repulsive vulgarity to be met with in such quarters arises from

the fact that the true ratio of style has not been found. Even popular comic operas can be admirable when the true style has been found; when they are repulsive it is mainly because the makers of them have no sense of style at all. And it would be absurd to consider the style of light art of no consequence. There must be in all men's lives infinite degrees of mood, from serious to playful. It is a very poor nature that can never be gay; but it is of great importance that the gaiety shall be of good honest quality, and not degenerate into brutishness. And it seems to be even more important in this country than elsewhere. For almost the only English music which has been cordially welcomed by the great mass of intelligent English people throughout the world is the music of farcical topsy-turvydom. It is probably the outcome of that dislike of appearing to be pedantic and solemn, which is characteristic of certain classes, which causes them to refuse to take music anyhow but as a joke. Such taste in music is the counterpart of the habit of persiflage which has been justly attributed to a large section of upper-class wealthy society, which does not necessarily imply an incapacity for being serious and devoted, but a dislike of showing it. It is an affectation of nonchalance which is really more dangerous in art than it is in everyday life. For the persistent habit of using an art, which is one of man's most sacred inventions, for mere trifling and fooling, is not only a degradation and an insult to the art, but is bound to produce deterioration of the standard of appreciation, and a lowering of the intention and faculty of composers. English people seem to have less quickness in perception of style than many other nations, especially in things musical. Hence the question of style in light things becomes of the more importance, since having this predisposition for farcical and irresponsible music, lack of style will be the more surely leave them wallowing in sheer unalloyed stupidity.

While insisting that style is a desirable and possible quality in every standard of art, it must be admitted that it is no positive criterion of the quality of the thoughts expressed in the style. The style can be no more than a criterion whether the thing is good of its kind or no. Yet style is so closely interwoven with every moment of art's existence that a great thought is hardly separable from the style in which it is expressed; and a great thought which comes from a full heart is almost sure to be expressed in a style which is consistently noble and dignified. Whereas a thought that a man is only trying to make appear great is often betrayed by some triviality of detail, some glaring inconsistency of phraseology which betrays the mountebank or the charlatan.

The greatest achievement in point of style is to convey the idea which belongs to the artist or the speaker in its widest significance in the exact terms—no more and no less—which will make it take the most complete hold of the human mind. The perfect style does not weary with superfluous explanations, nor leave in doubt by lack of decisiveness. It anticipates how far a suggestive word will carry the mind, and how much can be left out. It plays with associations, with relations of terms to one another, with the lilt of rhythm and the infinite variety of tone. The resources of artistic appeal to men's sensibilities and intelligence seem almost inexhaustible. But there is a very important qualification, which restricts the range of what is available, and that is consistency. All things are neither lawful nor expedient. It is the misuse of resources which is mainly responsible for vulgarity; the hodge-podge of phraseology belonging to the pulpit and the street; the jumble of symphonic style and the histrionic. Some methods of art are capable of absorbing far greater of traits drawn from many different quarters than others. The greater somewhat

easily absorbs the less. And yet the greater easily drops and its nobility is tarnished by the deliberate utterance of a triviality. An inconsistency of style may be an accident. But if the accidents recur what seemed to be an accident becomes an essential. Many gifted composers have gone so far as to give the world a noble phrase which seems to have the qualities of fine music. But the impulse does not last. Lack of fibre, lack of the power of persistence, prevents the maintenance of the high level of thought, and then comes the inevitable make-up—mere phrases decked in futile and superfluous ornament; tricks of art which have no real relation to the mood at first suggested. The incapacity to maintain the standard of style betrays the lack of genuineness of the momentary spasm of inspiration which seemed to promise such great things. The great minds maintain the relevancy of the mood and the style. There is no variableness nor shadow of turning in the rugged Promethean spirit of the first movement of the Ninth Symphony, no shuffling make-believe to mar the fiery concentration of the first movement of the C minor, no mundane irrelevance to weaken the triumphant sweep as of the singing of an infinite heavenly host in the *Sanctus* of the B minor Mass. The consistent elevation of the style is equal to the depth and fervor of the thought.

All things are neither lawful nor expedient in style, but those only which are perfectly consistent with the conditions, the material, and the mood which the composer expresses. There is the style which is apt for things mundane, and a style which is apt for things devotional; a style for things pathetic, a style for things gay. Trivial phraseology is out of place in times of mourning, tragic violence in times of merriment. And the style which is inconsistent with the mood makes the product ring false, so is it with inconsistency in relation to conditions of presentment—the operatic work

written in the style of absolute music, the instrumental music written in the histrionic style. There may be positive vulgarity in thought, but the greater part of vulgarity arises from misapplication of style. While even things little and light may be made admirable by dexterous consistency of style, the greatest inspirations cannot dispense with it.

In the end style is the sum of the appearances of all the factors which make up a work of art or an entity. It is the sum of the outward manifestations of qualities. The style of an apple-tree is the sum of the appearances produced by the shape, color, texture, and set of the foliage, the ruddy red of the fruit, and its relation to the color and character of the foliage, and the angles of the ramifications of the branches. The style of an orange-tree is quite different. The glossy leaf, the bright yellow fruit, the scent, the method of growth of the boughs, present quite a different effect, and suggest a different climate and different conditions and surroundings. We can hardly imagine such a monstrosity in nature as a tree made up half in the style of an apple-tree and half of an orange. The absurdity of gathering grapes of thorns or figs of thistles is self-evident. Yet the law of consistency in art is just as essential and as logical as in things organic. A perfect work of art is a perfectly organized presentation of an original unity. If apples are found on one bough and figs on another, men may guess that it is a sham. The perfect adaptation to conditions entails perfect unity of style, and it may be inferred conversely that complete perfection of style is to be found in perfect and relevant consistency.

SINGING AS AN ART[1]

BY WILLIAM SHAKESPEARE

[WILLIAM SHAKESPEARE, Professor of Singing at the Royal Academy of Music, London; b. in 1849, at Corydon, London, where he became choir boy and organist at an early age at St. Andrew's; studied at Royal Academy of Music, 1860-65, where he won the King's scholarship in 1866; and the Mendelsshon scholarship in 1871; studied composition at Leipzig Conservatory, 1871-72; took course of singing instruction under Lamberti, in Milan, 1872-75; returned to London, 1875, and became famous as a teacher of the Art of Singing; has frequently delivered lectures in England, and lectured in 1900 in the United States. His compositions comprise music for orchestra, pianoforte, concertos, string quartets and songs. For five years conducted concerts of the Royal Academy of Music. AUTHOR OF *The Art of Singing.*]

The limited time at my disposal compels me to be brief in my lecture on "Singing as an Art."

I must preface what I have to say with a few words on the historical development of the art, recalling to your memories the names of some of the most eminent of the writers for a single voice.

We know that Henry Lawes, born 1595, wrote capital songs, demanding some sustaining power, and that Purcell, born 1658, composed his touching and sustained air, "Dido's Lament," as well as songs demanding the execution of scale passages, such as "Let the mighty engines." Alessandro Scarlatti, born 1659, wrote such airs as "Toglietemi la vita ancor," and "O cessate di piagarmi." Lotti, born 1667, who used modern harmonies with freedom and grace, composed "Pur dicesti," and Caldara (1678) wrote the air "Selve Amiche," which is a splendid specimen of the *sostenuto* or sustained style. These and many other composers wrote splendidly for the voice. All goes to

[1] Lecture, originally delivered in London, presented here to supplement the lectures originally prepared for the International Congress of Arts and Science.

prove that at this period there existed already a school of singing.

Bernacchi, born 1690, was equally celebrated both as a singer and a singing master. He received instruction from Pistocchi, then the first singing-master in Italy, where, we read, there were not a few of such at that time. Bernacchi was engaged by Handel in 1717 to sing in his opera "Rinaldo."

Porpora, a pupil of Scarlatti, teacher of singing and composer, was born at Naples in 1686. He wrote many operas and established a school for singing, whence issued those wonderful pupils who made his name so famous. He was the greatest singing master who ever lived, and from his pupils have been handed down to us the relics of a grand style.

Porpora has left us no written account of his manner of teaching, and his *solfeggi,* or *vocalises,* differ from others of his time in being more exclusively directed to the development of flexibility of the voice. To a profound knowledge of the human voice and an intuitive sympathy with singers, Porpora must have united the genius of imposing his will on others. It is said of him that he kept his pupil Caffarelli to a sheet of exercises for five years, and on the pupil asking if he might not be allowed to sing an aria, the master replied, "Go, my son, I have nothing more to teach you, you are the greatest singer in Europe." Caffarelli excelled in slow and pathetic airs as well as in the bravura style, and was unapproachable in beauty of voice and in the execution of the trill.

Porpora's pupil, Farinelli, when the Emperor Charles the Sixth expressed his regret that so consummate an artist should devote himself entirely to exhibitions of skill and bravura, struck by the truth of the criticism, resolved to appeal more to emotion, and proved adequate by becoming

the most pathetic as he had been the most brilliant of singers.

Farinelli had an inimitable power of swelling a note by minute degrees to an amazing volume and afterwards diminishing in the same manner to a mere point. This singer excited such enthusiasm in his audiences that one lady ejaculated the phrase (perpetuated by the painter Hogarth in "The Rake's Progress") "One God and one Farinelli." It was Farinelli who sang a cadence in a song with a trumpet obligato, and after finishing a long note, so that the trumpeter had to give up out of breath, extended the cadence with a further vocal passage in the same breath.

Farinelli, however, was not so fortunate when singing with his great rival Bernacchi, whom I have already mentioned, for on their meeting in public, after Farinelli had sung an air with great effect, Bernacchi repeated this with the same trills, roulades, and cadenza in such a superior manner that Farinelli, who possessed the sweetest and most modest disposition, owned his defeat, and entreated his conqueror to give him further instruction, which Bernacchi generously did. Farinelli thus perfected his style, and became the most remarkable singer, perhaps, who ever lived.

Pachiorotti, who, with a defective voice, possessed high intelligence, and made himself a consummate artist, was followed by many great singers. Among them were Gizziello and later on Crescentini.

In the time of Mozart the singer Faustina was credited with such extraordinary powers of respiration that it was supposed she could sing while taking in as well as sending out the breath.

The roll of famous artists in modern times includes among others Catalani, Malibran, Grisi, Rubini, Tamburini, Lablache, Guiglini, Mario, down to Adelina Patti, Santley and Jenny Lind. The last mentioned genius I myself

heard sing Mozart's air from his opera "Il Re Pastore," and in this she sang a trill with violin obligato in the most perfect *legato* style, so that every note agreed with the trill of the violin,—a marvellous achievement, but in addition, the feeling of the song was expressed in the most touching way.

Now what are the technical terms which can convey the qualities of this grand vocal art? Surely they are the unerring attack of the note in the very centre of the sound: the *sostenuto,* or sustaining all notes and joining them to others with a perfect *legato* without either jerkiness or slurring, and with the quality of expression intended; the *messa di voce* or swelling from *piano* to *forte* and back to the softest sound without loss of quality; command over execution; expression and pathos; breadth of phrasing which is only possible to those who have command of a long breath; and intensity or carrying power sufficient for the largest halls or theatres. Handel, Bach, and Mozart, and, among the moderns, more especially, Rossini, Bellini, Donizetti and Verdi, knew how to bring into play all the resources of their singers in respect to the points I have just mentioned. They gave them time to breathe and collect themselves between the phrases by a bar or two of the orchestra, in a manner quite different from later composers who often give little or no time for the singer to breathe.

Bach and Handel, both born in 1685, were two of the greatest musicians who ever lived. Handel, in 1706, traveled all over Italy, met the well-known singers of the day and composed operas for them, and for many years was connected with the King's Theatre, London. In the numberless masterpieces of this great composer we meet with every device favorable to the singer's art. Matchless *recitative*—loveliest airs—slow, sustained notes fostering *messa di voce*—many spaces for the singer to recover *breath*

and calm—trills and passages—invocations and triumphant phrases. For *recitative,* "Deeper and deeper still," and for sustained notes, "Waft her, angels," and "Comfort ye;" for vigorous passages, "Ev'ry valley" and "Love sounds the alarm;" for prayerful utterance, "Pious orgies;" for invocation, "O sleep," "Father of Heaven," and "O Liberty," also "Heart, thou source of pure delight" ("Acis and Galatea"). How many of these commence with the voice unaccompanied! Note the phrasing of Handel, where he interrupts the musical phrase, sometimes more than once, on a single word, in the air "Where-er you walk" from "Semele."

Sebastian Bach, who was neither a traveller nor a writer of operas like Handel, at times gives to the singer uncouth and awkward passages, difficult chromatic intervals—words recited on the highest notes—a voice-part perhaps treated too much like a solo stop on the organ—disregarding the compass or most favorable parts pertaining to the different voices. Yet in spite of all this, what effects! In *recitative* and *sostenuto,* "Ah, Golgotha;" and the following air, in religious fervor and slow passage singing, "With Jesus will I watch and pray;" for quicker passage singing, "Haste, ye shepherds;" for holy devotion, "Into Thy hands my spirit I commend," etc.

Glück, a German composer, born 1714, studied in Milan, and his first operas met with some success. Handel, however, declared his music at this period to be detestable, and asserted that he knew no more about counterpoint than his (Handel's) cook. Glück went on persevering. He entirely reformed the style of writing for the stage, and in 1762 brought out his opera "Orfeo ed Euridice." He was not satisfied until he introduced what he considered a still more truthful kind of declamation, and banished all false and useless ornaments from operatic music. Note the pro-

foundly dramatic accents of Orfeo in the recitative and lovely air "Che faro." In the air, how he uses the *legato* effects of the voice in often giving more than one note to a word. What a stirring climax there is at the end of the piece!

Now, unfortunately, little is known of the methods adopted by the old masters of singing. They were not in the habit of printing their secrets as nowadays. According to precepts handed down to us, we may gather that singing "as an art" consists in freedom of the throat and command over the breath. That is to say, by breathing out slowly on an imaginary object with perfect command so that the breath goes out as one wills and, furthermore, by loosening the throat—a much more difficult matter—so that all the notes sound to this controlled breathing, the result is "perfect production." The voice can now be produced with greater force—a force proportioned to the increased command of breath and to the perseverance of the singer in developing his vocal range.

The interesting question now arises:—What would a singer of the old school find if he were to appear to-day? He would ask himself, "Is singing still an art?" and how could he use his masterly effects, so necessary in a past age? He might inquire "What is there to sing to in modern vocal works?" Could he make use of his *sostenuto,* his *legato,* the *messa di voce,* the *fioritura* execution and trills? I fear he would find that modern music affords no scope for these effects. Modern music has generally a separate syllable for every note—only *forte* singing is required, by reason of the presence of elaborate and powerful accompaniments.

A voice that has always to be produced at high pressure will, in the end, of necessity fail to produce a pure sound. We constantly hear singing out of tune. The artist can

scarcely avoid fatigue in making the strenuous efforts which are demanded under modern conditions, and one result is that audiences become gradually indifferent to perfect singing in tune, and to steadiness of voice, and are no longer sensitive to delicate effects.

How then is an artist to touch his audience when they have become accustomed to notes that are not commenced in the centre of the sound, and to a forcing of voice and sentiment alike? There is only one possible way of attaining the desired result. He must do what Verdi has asserted to be essential, namely *ritornare all' antico, i. e.,* return to the old Masters, and he must begin afresh to educate his audience to a higher appreciation of the art of singing. If the artist only perseveres he is bound to succeed in this, and we shall see a restoration of the true art of singing.

It is time now to give a short sketch of the technique of singing as practised by a past age.

Singing is a *prolonged* talking, and must be higher and louder than the voice we use in ordinary conversation, and more especially is this the case when the voice has to be used in a large hall.

Some people say "breathe naturally." One may as well tell the gymnast to perform naturally. His wonderful feats may appear natural, but they are the result of a vast extension of that which is natural to us.

If when we draw in the breath we feel expansion about the soft place under the breast bone; we have done so by using the diaphragm. Another mode of drawing in the breath is to expand the ribs. Now the ribs, when we raise them, move outwards and the cavity inside is made larger than before. A singer must use both these methods; he must feel an expansion of the body at the soft place, and he must also feel an expansion of the sides by lifting the ribs. Perhaps the greatest fault that we can make is to

raise the ribs by the muscles which are fixed to the points of the shoulders in front. We should avoid this error by the use of very powerful muscles which are felt at the back under the shoulder-blades and under the arms, and so expand enormously the sides of the body. The muscles by which we drive out the breath are principally situated in the abdomen. They perform a double duty: one is to pull down the ribs; and the other is, by their pressure inwards, to cause the diaphragm to ascend again.

By the control of the breath we mean that we can regulate the action of the muscles which draw in the breath, at the same time that our expiratory muscles are sending it out. There is then a struggle between these two forces, the one force causing a continuous steady pressure while the other regulates, controls and economizes this same pressure, which if not regulated would let the breath escape altogether and the phrase sung would come to a premature end.

We see the result of a clumsy way of breathing in the unpleasant gaspings and noisy breathing produced by those who rely on the raising of the chest and shoulders. The poet puts this correctly when he says, "My bosom heaved with many a sigh." On the other hand, the result of a right method of drawing in the breath is a noiseless and imperceptible respiration. It should be so imperceptible that the audience is unaware of the breath being taken

The old Masters knew nothing of anatomy, yet Science only proves how right they were in their ideas of breathing. In accordance with the accepted axiom "Summa ars celare artem" (the highest art lies in its concealment), they insisted that the goal of the singer should be "imperceptible and inaudible breathing." The celebrated singing master, Lamperti, was never tired of insisting that the points of the shoulders must be free, and that the breathing of a singer should resemble that of a swimmer.

The great tenor, Rubini, was once closely watched for several minutes by the equally celebrated bass, Lablache, and although the latter was holding Rubini's hand while singing a duet, he declared that he was unable to observe when or how he breathed, so noiseless and imperceptible was his method of respiration. An oft-repeated anecdote of Rubini, however, describes that, later in his career, being desirous of bringing out the high B flat he used so much force as to break his collar-bone! First, I do not believe this story, but, if it were true, either the artist's collar-bone had become very brittle, or else he was not singing with that schooled respiration described on the occasion of his duet with Lablache.

A friend of mine tells me that his father knew Lablache intimately, and that this artist one day for fun sang a long note from *piano* to *forte* and back to *piano,* then drank a glass of wine, and, without having breathed, finished by singing a chromatic scale in trills up the octave all in the same breath, and finally blew out a candle with his mouth open!

There were giants in those days!

A word on voice-production. When we sing, the delicate edges of the vocal chords are brought together so that the pressure of the breath sets them into vibration, and prolonged sound is the result. The muscles connected with the vocal chords enable us to tune them to the notes of the scale, and melody ensues.

Whilst many earnest scientists have endeavored to determine the exact action of the most delicate muscles in the larynx, nothing of so simple a character has yet been discovered as to make the study of singing any easier.

We shall learn more by observing what happens to the muscles which form the floor of the mouth. They assist in holding the larynx in its proper position, and become

tenser as we ascend the scale in the different registers. The muscles, however, connected with the different movements of the tongue lie just above these; indeed, they also help to form the floor of the mouth.

The least rigidity of the floor of the mouth involves the muscles of the tongue, and the tone as well as the pronunciation is distorted through the awkwardness of the singer. The term "placing the voice" is so commonly used that I do not hesitate to employ it here. But when the voice is rightly produced the placing muscles do not interfere with the muscles above them which move the tongue, and so pronunciation and tone are now unimpeded, for they act independently. By whispering a sentence, and then suddenly singing it, we can observe the placing muscles come into play, and how they are quite different from those we employed in whispering only.

Thus we see that the difficulty lies not in the pronunciation itself, but in singing in such a manner that unconscious pronunciation is a result. In bad singing the jaw is always fixed; indeed, a triple combination for evil is coincident in the fixedness of the tongue, throat and jaw. When one is rigid all are rigid, and this could be easily explained scientifically.

The old masters of singing, without any knowledge of anatomy, held it to be of the greatest importance that during the singing of scale passages the jaw was not to move. Their maxim was "He who moves the mouth cannot sing." Pachiorotti held that "He who knows how to breathe and how to pronounce" knows how to sing. Crescentini averred that "Looseness about the neck and the voice on the breath" is the art of singing. If we do not produce the voice rightly, either the throat contracts in a manner which we recognize as throaty, or the nasal cavities are rigidly held and we say the sound is nasal; or we hear a hooting,

lugubrious sound, terribly monotonous and sepulchral; or silly sounds are produced which have been called in Italian *voce bianc, voix blanche* by the French, or white, blatant, colorless voice, like that produced by the half-witted.

Awkward rigidity about the floor of the mouth is also fatal to the freedom of the muscles which tune the larynx. So when a note starts exactly on the pitch intended, it is the most important sign of perfect voice-production. Many of us at times have sung a note which seemed to roll out in unconscious freedom and with great sonority. The art of singing is to find out how this excellence may be attained in all the notes of the voice.

There are placing muscles and tuning muscles. When length, breadth and thickness of the vocal chords are rightly adjusted, the intrinsic muscles of the larynx can tune the different notes in unconscious ease. Moreover, such notes respond to the right breath control.

We learn from the old Masters that they arrived at placing the voice, poising the larynx on the breath, by the very simple method of endeavoring to sing a note while they measured the breath by breathing on a mirror or against a lighted taper held opposite the mouth. They could thus judge whether the note sounded fully without disturbing the breath. Supposing the note was not placed, the singer was compelled to press more than he could do without upsetting the breath control. This caused a puff, which was considered a disaster. Under this system it was found that that was the right note which produced the most sound with the least breath. Scientifically they were right, for they produced a greater result with less means.

The student, in trying to sing a note, frequently forgets his breath control, and this will bring home to him the truth of the old saying, "The art of singing is the school of respiration."

The looseness of the neck and unconscious feeling about the throat during singing caused the old singers to boast that the Italian singer has no throat. They might have added, no jaw and no tongue.

Then a note may be described as *placed* if it speaks to the breath we are able to control, if it can be produced in the very centre of the sound intended, if it leaves in freedom the pronunciation and the expression.

The essence of the teaching of the old Masters is contained in the axiom: "Every note of the voice should be produced by a column of air over which the singer should have perfect control."

The attack of the note (that is to say, the art of starting a sound with frankness in the very centre of the pitch intended) has always been regarded as a great test of good singing. The many scoopings up to, or "seeking or feeling for the note," are, of course, a sign of bad production.

The accomplishment of what is known as "legato singing," namely, that *joining of the notes* which yet must at the same time all be "clean cut out," was looked upon by the old Masters as another of the great signs of good singing. They said, "He who cannot joint cannot sing." All the notes of a passage on the same vowel should be "like pearls on a string," and the string supporting them is the right control of the breath.

Those who have mastered breath control and freedom of the throat and tongue are now in a position to add tone to the voice through the loose, unrestrained condition of the space behind the tongue and the nasal cavities. The throat in its normal state and when we are asleep is wide open, and only bad singing interferes with this. For some vowels the throat space undoubtedly has temporarily to be somewhat contracted, and possibly as we sing higher there may be a corresponding modification of the throat space.

But all these changes are unconscious, and the contortions of the bad singer render these natural conditions impossible, just as the unconstrained throat of the good singer leaves nature free to utter her loveliest tones.

With the throat wide open, the vowel sound which is emitted is *ah*. This pure *ah* was the goal towards which the Italian singers never ceased to advance, as affording the greatest test of tone and facility of pronunciation.

As an aid to the freedom necessary to this perfect vowel the student was wont to practice a rapid tongue movement before the *ah,* and the consonant *l* was generally adopted on account of its demanding a free movement of the whole of the tongue. On singing *lah* rapidly the inclination to stiffen the instrument was overcome. This sudden tongue movement, when done with entire absence of hesitation, and in conjunction with a proper breath control, became the foundation for the attack of the note, and the freedom and richness of the *ah* was found to depend on its daring and spontaneity. The value of *lah* as a foundation study cannot be over-estimated by the student, who through it will discover freedom of throat. The sudden, rapid movement of the tongue in reiterated *lahs* was the device used by the old Masters for bringing about the freedom of the tongue and jaw which invariably accompanies good singing.

Sing with frank and fearless attack *lah, lah, lah, lah lah,* on the same note. Was the tune commenced in the very centre of the sound intended? Was there no hesitation at the commencement? Was the jaw in repose and independent of the movement of the tongue? Another mode of finding the perfect *ah* is to repeat it in a slow, *staccato* manner on the same note in the same breath. If we tune with absolute accuracy, and if we open the throat so as to emit a pure *ah,* we shall be compelled to control the breath rightly. These exercises each produce in the end precisely the same result, viz., the fullest natural tone.

Let us now take a step forward and vary the vowel sounds used in the exercise, while strictly regarding the rules just laid down for naturalness of tone. We will sing, *lah, leh, lee, ah, eh, ee.* Can we change the position of the tongue (which rises somewhat in the centre for *eh,* and still more for *ee*), without moving the jaw, or allowing the breath to slip and the throat to close?

We have now arrived at the last test of good singing, which I must insist upon. When we sing two or more notes on the same syllable do they join in the *legato* style? Dare we sing with unerring tuning? We have arrived very nearly at the goal of voice production if we can do this on consecutive notes on all the intervals.

Lastly, if we can sing in the *legato* style we have arrived at a state of freedom which will permit, with practice, the execution of the most rapid passages.

A word about registers. In Italy the stops of the organ are called the registers. Now because of this, the three different characteristic series of tones which exist in every voice have been named the three registers. One might say these three stops are the *grand* stop, the *brilliant* stop, and the *flute* stop.

We have all heard of the chest voice. This simply means that the lowest notes of the voice when produced naturally in a certain way cause a remarkable sensation of vibration in the chest which can be physically felt by the hand of the performer, as well as heard by the audience. Such notes are manly and grand in character.

In the middle of the voice, immediately above the chest register, is another series of notes usually termed the medium register. In these notes the most characteristic sign of singing correctly is the extraordinary sense of vibration of the air in the mouth, which seems to strike the upper teeth. The notes of this series of sounds are distinguished by their brilliant and silvery quality.

The third register is known as the head voice, by reason of the sensation felt by the singer, and recognized likewise by the listener, that the sound reverberates in the skull beyond the last upper teeth. All the teeth that are shown when we smile must be shown when we sing the head register. These head notes are characterized by a fluty and bird-like character of surpassing loveliness.

The first notes of all the registers are weak and a source of trouble to the student, for the breath slips out until some experience is gained. For this reason, instead of strengthening the lower, weak notes of the medium register, the inclination of all singers is to hurry on their studies by forcing up the chest notes when they ought to sing medium, with the result that the men are said to shout or bawl, or yell like the men in the streets, and the contraltos and sopranos force up the chest notes and emit sounds like boys shouting to each other.

Mezzo-sopranos and sopranos, moreover, are very prone to avoid the cultivation of the head-notes altogether, and to force up the medium register, with a sad result. It is no longer singing in a high sense, it is not expressive of lovely feelings, pronunciation is impossible, and the characteristic sound of the voice is described as screaming, screeching; whereas nothing in nature is more lovely and truly womanly than the sound of the head voice.

The registers so dovetail one into the other, or overlap one another, that we can sing softly some notes in one register and repeat the same notes loudly in another register. We can also commence a note *p.p.*, and swell it out to *f.f.*, and return to the softest *p.p.*, but probably not always with the same throat mechanism; indeed, the achievement of this was formerly considered the culminating effort of the singer, and was termed the *messa di voce*. It is, however, as necessary to sing with loose throat to do this as it is to join the notes in the *legato* style.

The trill was another of the accomplishments highly thought of as proving the mastery of the vocal art. It is, perhaps, the most delightful of all the embellishments of music. The trill is still used in piano-forte and violin pieces, where it is still regarded as a worthy aid to expression. Singers, however, finding its accomplishment beyond their powers are wont to assume that, together with scales and passages, it is unworthy and meretricious and that as an ornament, it is but an empty and stale device for showing off the voice.

The trills have not yet been cut out of Beethoven's Sonatas, so we may not deem them unworthy of a word here. As the performance of this delightful ornament is a sure sign of the greatest freedom of the instrument, the two notes must be perfectly produced by one or both of the devices already mentioned. That is to say, we must sing the two notes on *lah la la la,* faster and faster until an even trill is the result, or we must do *staccato* notes more rapidly until the notes join and trill of themselves. In practicing this, never sing faster than you can sing exactly in tune, exactly in time (that is, not jerking), with the perfect pronunciation of *ah,* and with a smiling tone which must reveal absolute ease of manner.

The *portamento* is another graceful effect.

Pronunciation.—The vowels of the English language are thirteen in number, and as we have conquered the pronunciation of the typical *ah,* we must sustain the other twelve sounds with similar freedom starting with *ah,* we find such sounds as *at, a* (and *air*), *et, it,* and *ee,* which are different upward tongue positions; then come changes of lips and throat, such as *oo,* h*oo*d, *aw, o,* o*t, er* and u*t.*

As singing words at first takes our attention from the unerring tuning which we should associate with our studies, beware of commencing too soon to attempt singing with

words. The old Masters insisted on *solfeggi* and *vocalises* or songs without words for a considerable time before permitting an aria.

Intensity and Expression.—By intensity the good singer means the intense pressure of the breath on the voice which gives effect to any and every emotion he chooses, because he has power over the breath that intensifies, and has acquired the freedom of the instrument. By means of this he can make the loudest sounds possible expressive, and he can also cause the softest sounds to be carried to the farthest end of the theatre or concert hall. The artist when he intensifies a *pianissimo* note can make this travel to the end of the room and touch his hearers, and arouse emotions as of distance brought near to us, or of memories of the past recalled. The bad singer has to rely on his loud notes, which become monotonous; he dare not sing softly, he would most likely become inaudible.

Let us never cease striving to bring out all the force and intensity with which nature has endowed us; but, at the same time, let us endeavor never to give out more force than that with which we are able to express. The real amount of fervor we can produce depends on our instinct and individuality, and the result is the depth and intensity of expression of which we are capable.

The sacred warmth of expressive melody is the gift of the gods, and without it there will be little emotion.

The play of the face varies the expression of the voice. How could the inanimate face produce sounds other than monotonous? It is impossible to smile with the face and express sorrow with the voice. Every emotion has its appropriate facial expression. So if we insist on expressing with the face the sentiment we sing, and at the same time control the breath, we shall certainly succeed in our art.

Phrasing.—Let us study the words and music we have

to sing until both are mastered mentally, the picture of the words and the phrasing of the music; the *crescendo* of the ascending notes of the melody and the *diminuendo* of the falling cadence; the accents necessary to the words, the sensitive loveliness of the accents which belong to the melody.

The effect of diminishing the power of the voice on nearing the end of a phrase is sometimes magical. Let us avoid dragging and hurrying. The greater the artist the less he tampers with the time of the music, without due consideration.

The old Masters prided themselves on their phrasing, on the calmness of the *tempo* on the just accent, and on the *crescendo* and *diminuendo*. The singers were so sensitive to lovely phrasing that the clarinetist, Lazarus, whom I knew intimately, on being asked "Where did you learn your exquisite phrasing?" said, "I learned it from the singers at the opera, some fifty years ago." On the other hand, a great tenor, on being asked, "From whom did you learn your phrasing?" said, "I fancy I learned more from hearing Lazarus play the clarinet than from any one else." Nowadays the instrumentalists are certainly ahead of the singers in loveliness of phrasing, but formerly the contrary was the case.

The development of the orchestra has, of course, been carried to its highest pitch by Wagner. But, unfortunately, while he has increased the volume, the richness and complexity of the orchestra to an unprecedented degree, he has been unable to add anything whatever to the volume of the human voice. There still live composers who have written music full of deep feeling, true loveliness and dramatic character, yet not well-fitted for the voice, and, indeed, sometimes almost incapable of successful performance.

As a public singer I have had to sing cantatas and other works which, though written for a tenor, were quite un-

suitable, and I have heard many times artists singing music too low, or painfully laden with words on the highest notes, parts almost impossible to render with any true vocal effect. Vocalists have asked the composer, "For what voice is this written?" He answers, "Well, I do not mean exactly any particular kind of voice; it is for a kind of baritone or mezzo-soprano." What a confused idea of the capabilities of the different voices!

Some two years before his death, I begged the great Brahms to write some songs specially for a tenor voice. I told him I found his lovely songs too low. He said, "Transpose them higher, for I like them to be transposed according to the voice." "But," I said, "if I put them up, then there are notes which will be too high, for the tenor voice is only good between the two A flats. Your songs are too extensive in compass." "Ya, ya!" he said, "that is what my friend Walther, the tenor, tells me." What a loss to singers it is, then, that the beautiful songs of Brahms, as well as those of other great composers, were not written for some particular voice, like the music of the Italian composers.

The question suggests itself, Why do not composers study singing before writing for the voice, just as they must study the pianoforte or the violin before writing a concerto for these instruments? It is well known how much Mendelssohn was indebted to his friend David for the excellence of his violin part in the *Concerto,* one of the most graceful works ever written for any instrument. Brahms, too, sought the assistance of Joachim when engaged in composing his violin *Concerto.*

In the olden times, singers were frequently composers and composers were singing-masters. Furthermore, Handel and Mozart both went to Italy and studied singing, and associated with singers. I believe the time is fast coming

when there shall spring up composers who will study singing and singers, and find the *legato* style of singing—the long, expressive notes, the invocation and all the charms of a classic school as worthy of their attention as the pianoforte, violin, and other instruments. There exist the same splendid voices now as ever, and the same poetic imagination. There are already signs everywhere that an inquiry is being made relative to singing and singers, which augurs well for the art.

The more the subject is discussed, the better. Such discussions cannot fail to be the means of bringing together the composer, the singer, and the singing-master, and it is only by the constant association of these three that we shall realize the great object on which the hopes of all of us are set, namely, great works of art that shall open to us new fields of beauty through the medium of the only instrument that is at once human and divine.

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THE IDEA OF LAW IN POETRY[1]

BY WILLIAM J. COURTHOPE

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FINE art is the imitation, by the poets, painters, sculptors, and musicians of any people, of the idea of the Universal in Nature. This idea springs out of the character of the race, the course of its history, the common perceptions of its men of genius. As the life of a nation develops, the practice of its various artists instinctively falls in with the growth of society, advances with it to maturity, and languishes in its decline. Sometimes, as in ancient Greece, the history of art seems to manifest itself with almost as much certainty and regularity as the life of a flower, or a tree, or a human body. The Greek poet discovered by a kind of spontaneous instinct how to express the idea of greatness in his race in the divine simplicity of hexameter verse; the Greek musician learned at a very early stage how to imitate human passions in dance and song. With the remarkable development of civic life that followed the Persian invasion the Greek architect and sculptor co-operated to embody in marble the loftiest ideas of religion. Instinctively, in the same age, the dramatist combined, from the epic minstrelsy and the religious hymn, a mode of imitation fitted to express the profounder ideas of society about life and nature. With rare and delicate taste, Æschylus and his two great successors made the drama, in its progressive development, a mirror for all the changes of moral

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and religious feeling that transformed the Athenian mind between the battle of Marathon and the Sicilian Expedition. And when, after the battle of Chæronea, the Greek enthusiasm for liberty and the old Hellenic belief in the gods died away together, the loss of imaginative energy in society reflected itself in the purely prosaic imitation of the New Comedy. In all directions the law of Greek art was embodied in the works of great artists, and Aristotle's best criticism in the *Poetics* is not new legislation, but the declaration of the law of Nature already existing in art.

Had it been the destiny of Aristotle to declare the æsthetic law of any modern European nation, his task would have been far more difficult. In no Christian society has the artist shown the same spontaneous faculty for imitating Nature as in Greece. Many obstacles stand between Nature and the imagination of the modern artist. To begin with, he has been cut off from the fountain head of his primæval instincts by the conversion of his ancestors to Christianity. Moreover, the nation in modern Europe is not constituted simply, as in the small Greek states, but is vast and complex, composed of antagonistic classes, each with its own perceptions and ideals, which often baffle the attempt of the artist to divine the ideas common to the whole society. Lastly, the modern imagination and judgment are bewildered by the presence of surviving models of Hellenic art, which constantly oppose themselves to the ideas derived from Christian education. Nevertheless, a historic examination of art will hardly leave room for doubt that the varieties of ideal imitation in the different countries of Europe have been as much the product of national character as was the case in the City States of Greece; and I propose in this lecture to illustrate, as clearly as I can in the time at my disposal, how national forces have combined to give a dominant bias to the genius of French poetry.

Experience shows how closely the master qualities of the French character still correspond with Cæsar's description of them. The assimilation of Visigothic and Frankish elements have not materially altered in the Gaul either the brilliant and fickle temperament, vividly colored by transient emotions, the rapid logical perception of things, or the sense of artistic form and proportion common to all races that have felt the influence of the Latin mind. As this national character expands in the course of French history, there passes before the imagination a long drama of something like civil war between two mutually irreconcilable factions—the bourgeoisie and the feudal aristocracy. The landmarks of the struggle stand forth prominently; the long agonizing conflict of the early ages between the Crown, as the representative of civil law and order, and the great vassals, as the representatives of feudal privilege; the victory of the Crown, allied with the bourgeoisie, under Louis XI., the religious wars between Catholics and Huguenots; the accession of Henry IV. and the elimination of the Huguenots as a political power; the wars of the Fronde and the annihilation of the political power of the feudal aristocracy; the absorption of all the powers of the State by the Crown in the reign of Louis XIV.; the decay of the Monarchy in the eighteenth century; the French Revolution.

As illustrating the working of the Law of National Character in literature, nothing can be more remarkable than the vivid reflection of this course of political development in the various stages of French poetry. There in the very infancy of society, may be observed the trenchant antithesis between the genius of the two opposing classes in the contrasted styles of the Provençal lyric and the *fabliau* of the Trouvère; the one the poetical vehicle of the inhabitants of the Castle, the other of the inhabitants of the town. We

see the two types brought into deliberately satiric contrast in the famous *Romance of the Rose,* in the latter part of which the bourgeois John de Meung mocks at the ideals of his chivalric predecessor William de Lorris. The alliance between the Court and the bourgeoisie is symbolized in the poems of Marot, who set himself to refine the character of the old French poetry to suit the more fastidious taste of Francis I. On the other hand, the poetry of Ronsard, the representative, with the Pleiad, of the party of the aristocracy, reflects in a new form the old tendency of the castled nobility to mark out for themselves a manner of conception and expression sharply separated from that of the vulgar. Ronsard's movement, in spite of his real genius, is seen from the first to be against the inevitable tendency of things, and is therefore doomed to failure; and in the same way D'Aubigné Huguenot ideals, unable to make head against the Catholic tendency in the French nation, find utterance, like a lonely "Vox Clamantis," in the lofty strains of *Les Tragiques.* Henry IV. ascends the throne; and with Malherbe as the dictator of poetical taste, the victory of the Monarchical over the feudal principle in French politics, the victory of reason over imagination in French poetry, is practically decided.

If, turning from this general historic view, we ask how these two parties respectively manifested their character in French literature, it is clear, in the first place, that the qualities in the French nation which the aristocracy communicated to the language were of the feminine order, both in their virtue and their defect. How remarkable is the long array of brilliant women who have left a name in French literature—the Countess of Champagne, Christine de Pisan, the Marquise de Rambouillet, Madame du Sablé, Madame de Sévigné! How powerful an influence on the course of refined taste was exercised by the Cours d'Amour,

the Hôtel Rambouillet, the Salons of the Précieuses! From the noble ladies of France, and the men who, according to the laws of chivalry, declared themselves their servants, the French idiom acquired that exquisite vein of irony and innuendo which made French conversation for so long the standard of manners in European society, and French prose the finest instrument of criticism, letter-writing, and diplomacy. But the masculine qualities of imagination are conspicuous by their absence. What the French aristocracy wanted in their literary style was substance, sincerity, a sense of the reality of things. Weigh the names of their representative men, Charles of Orleans, Ronsard, Voiture, Chapelain, St. Amant, against such names as Rabelais, La Fontaine, Molière, and Voltaire, representatives of the bourgeoisie; observe the triviality of matter in the lyrics of the Troubadours, in the poetry written for the Hôtel Rambouillet, in the romance of the Grand Cyrus; and you will see the defeat of the French aristocracy in the conflict of History explained in the conflict of Ideas.

The bourgeois element in French poetry is of an evidently opposite kind. It has none of the romance, delicacy, or spiritual imagination, which distinguish the work of the chivalric party; its qualities are, above all, good sense, shrewd observation, keen logic, a penetrating appreciation of hypocrisy and unreality, an unerring sense of the ridiculous, an Epicurean enjoyment of life. Deprive this bourgeois genius of its native tendency to vulgarity, by putting it under the patronage of the Court, give it subjects for imitation suitable to its knowledge and powers, find it an instrument of expression analogous to its favorite *fabliau,* and the flower of the French imagination will in time unfold itself in the Comedies of Molière and the Fables of La Fontaine. It is in the works of these two writers, perhaps above all others, that we may observe the operation of what

it is not improper to call the idea of Natural Law in French Poetry.

Molière has been severely censured by the more austere critics of France as a careless and slovenly writer. He is blamed for want of polish in his style, for his incorrect selection of metaphors, for his audacious plagiarisms; and all these reproaches he has to some extent justly incurred. But his defects are almost the inevitable accompaniment of his splendid qualities as a comic creator. Molière imitated the ridiculous in Nature wherever he found it. When he thought that Spanish or Italian phrases, or the vulgarisms of French idiom, were expressive of character, he used them without any regard to the delicate nerves of the French Academy. With as little hesitation he drew on the inventions of the classic and Italian dramatists or the *fabliaux* of Boccaccio, if they furnished him with convenient plots for framing his observation of what was deserving of ridicule in his own society. But all his creations are eminently original. Nowhere else than in France could such universal types of human nature as M. Jourdain Tarrtuff, and Alceste have been conceived and embodied. No one but Molière could have observed with such nice precision, and have expressed in dialogue so sparkling and lifelike, the essence of absurdity in the manners of *Les Prècieuses* or *Les Femmes Savantes.* As a mirror for such universal truths of Nature the refined literary language of the Academy, and the conventional standard of manners in the Hôtel Rambouillet, were equally inadequate. Molière in his Comedies doubtless leans to farce; but he does so because the old popular French farces furnished him with the ideal atmosphere required to give poetical truth to the observed realties of Nature. Nor do his bourgeois instincts carry him into excess. His seemingly buffon extravagance of conception and spontaneous

exuberance of expression were kept within due limits by the sense that his plays were to be performed before the most fastidious of monarchs, who would never have tolerated the exhibition of vulgarity beyond what was necessary for the purposes of art. Hence, in spite of its negligence, the composition and language of Molière are in the highest sense well-bred, harmonious, and classic.

Exactly analogous to the dramatic practice of Molière is the literary practice of La Fontaine, except that, as the poems of the latter were intended to be read, no one has ever blamed him for incorrectness of style. La Fontaine makes no more effort than Molière to raise himself into a consciously ideal atmosphere. He cares no more than Molière did for the praise of absolute originality; his fables, like the plots of Molière, are borrowed from the inventions of predecessors, fabulists such as Phædrus, Babrius, Horace, and a hundred others. But through all this borrowing and adaptation, the unmistakable character of the old French *fabliau,* and the individuality of La Fontaine, make themselves felt. His verses breathe the easy Epicurean air characteristic of his class. His peasants and citizens are types of the men and women whom he saw in the farms and markets; his beasts use the average human language of prudence and good sense. In the flow of his verse we listen to the natural idiom of the conversation of his time. Nevertheless, the ideal atmosphere, required for the imitation of the Universal, is never absent from his creations, and knowing as he did that he was writing for refined society, his poetry, with all its apparent ease, is in reality the result of the most careful selection of words and harmonies.

The dominant bias of French taste, however, discloses itself not merely in works in which the artist is felt to be dealing with materials akin to his own nature, but in the abstract reasoning by which men of genius have endeavored

to regulate practice in the higher spheres of poetic invention. For example, the French idea of law in art is strikingly exhibited in the approved rules of composition for the tragic drama. Unlike the dramas of Athens and of England, the tradition of the theatre in France is not of popular origin, but is the late creation of a few great poets, accommodating their practice to the taste of comparatively refined audiences. There was, indeed, a time when the itinerant stage of the Middle Ages found a welcome among the French, as among the English people, but these exhibitions had so dwindled during the miserable period of the Hundred Years' War, that, at the close of the sixteenth century, one company of actors, in the Hôtel Bourgoyne, was sufficient to satisfy the dramatic requirements of the whole country. When the taste for the stage began to revive the poet was free to invent for himself, and he naturally turned for his models to the tragedies of Seneca, never meant for acting, in which an abstract situation is worked out by means of rhetorical harangues and sharply pointed dialogue. The form thus adopted proved so acceptable to French taste, that, in spite of the efforts of Voltaire and Diderot, it kept possession of the stage for nearly 200 years.

Having thus grounded the practice of the drama on the authority of Seneca, the French poets proceeded to regulate it by the supposed theory of Aristotle. Corneille was the first to define the law of the stage in his *Discourse on the Three Unities of Action, Time, and Place.* He assumed that the external form of the Greek drama was something immutable; that Aristotle had defined its changeless rules in the *Poetics;* and that these rules had been faithfully observed in his own tragedies. Now the only unity on which Aristotle really insists is Unity of Action; and in his *Discourse* Corneille plainly shows that he does not know what Aristotle meant by Unity of Action. Unity of Action in

the *Poetics* means simply the representation on the stage of a fictitious story, with a proportioned beginning, middle, and end, involving a display of human passion, character, and misfortune, in such a form as to appear probable and lifelike to the spectators.

Shakespeare and the Greek poets perfectly understood the working of this fundamental law. So vividly does Shakespeare conceive his ideal situations as a whole, that he even realizes in his imagination the state of the climate and temperature, as when Hamlet says to Horatio: "The air bites shrewdly; it is very cold;" or when Duncan praises the amenity of Macbeth's Castle:

> This guest of summer,
> The temple-haunting martlet, does approve
> By his loved mansionary, that the heaven's breath
> Smells wooingly here: no jutty, friese,
> Buttress, nor coign of vantage, but this bird
> Hath made his pendent bed and procreant cradle:
> Where they most breed and haunt, I have observed,
> The air is delicate.

So again, in *As You Like It,* when Oliver asks the way to Rosalind's cottage, with what particular details the poet brings the scene before us!—

> Good morrow, fair ones: pray you, if you know,
> Where in the purlieus of this forest stands
> A sheep-cote fenced about with olive trees?

To which Celia replies:

> West of this place, down in the neighbour bottom:
> The rank of osiers by the murmuring stream
> Left on your right hand brings you to the place.

The fact is, that both the Greek and English dramatists were the natural successors of the minstrels—the former of Homer and the cyclic poets, the latter of the mediæval *trouvéres*—and their imaginations were accustomed to live in the ideal action of the story-tellers. Now for a story in itself

Corneille cared nothing. What he meant by unity of action was the unity of abstract idea in a drama. He understood very well the nature of the stage effects required to produce emotion in an audience; and he constructed his plays logically and scientifically with a view to securing these effects. I imagine that the way in which he composed a tragedy was something like this: First, he searched for a situation in which he might exhibit a conflict between the will and the passions; then, when he had found the subject, he filled in the situation with the characters, and determined their relations to each other in successive scenes; after that, he thought out the emotions and sentiments proper to each scene; lastly, he colored the whole of the dialogue with impassioned rhetoric and epigrammatic points.

Composing on this principle, Corneille was able to exclude from the structure of his drama every external that was not necessary to the evolution of his abstract idea, but he was far from attaining unity of action. He strove to imitate, as far as possible, the outward form of Greek tragedy, and took note of Aristotle's saying, that it is not necessary to represent on the stage the whole of a recorded action. But he did not observe that the reason of this was that, in the Anthenian theatre, the audience were all familiar with the whole story represented, and so were able to supply from their imagination the necessary gaps in the action. But this is not the case in *The Cid*. Corneille, in this play, merely selects from the story of the Spanish hero such episodes as he deemed necessary for the treatment of his own idea. We are plunged at the opening of the play *in medias res*. We do not know, except from the table of *dramatis personae*, who Don Rodrigue and Chiemène are; Don Diegue and Don Gomes are, or what were the events which led to the quarrel causing the complication of the

whole drama. The dramatic situation resembles a chess-board after the game has been developed according to one of the conventional openings. The love of Rodrigue for Chimène is held in check by Rodrigue's filial obligation to avenge the insult offered to *his* father; the love of Chimène for Rodrigue is checked by the duty imposed on her to avenge the death of *her* father; the dramatic interest depends on the solution of the psychological puzzle.

It is extremely interesting and instructive to observe how carefully Corneille applies the Law of the Three Unities to a tragedy thought out on this completely abstract principle. He wished to make the play appear logical to the audience *on the stage;* he did not care about making it appear real to *the universal imagination.* Accordingly, he pleads apologetically, in his *Discourse on the Three Unities,* that he has not departed from the rule of Unity of Place further than he was absolutely obliged by the nature of his subject. And as to the Unity of Time, since the action of the play is restricted by the supposed law to twenty-four hours, the dramatist is obliged by the course of events to make Don Rodrigue first kill Don Gomes, then conquer the Moors, then come back to fight a second duel with Don Sanche; and that he may do all this within the prescribed time limits, his father, Don Diegue, opposes the desire of the king to give *The Cid* an interval for rest and refreshment, observing that it is nothing for a man of his son's heroic valor to come from a battle to a duel without making a pause!

And yet, though Corneille is so anxious to satisfy the demands of a dramatic law which has no existence in truth or nature, he sees no improbability in representing Chimène making long speeches to her lady-in-waiting in order to show the audience the state of her mind in the struggle between her inclination and her duty; no improbability in bringing Don Rodrigue to his mistress, after he has killed

her father, to entreat her to plunge the same sword into his own heart; no improbability in causing the king to decide that Chimène's plea for vengeance against the man who has killed her father shall be satisfied by a duel between Rodrigue and Chimène's selected champion, the prize of victory being the hand of Chimène herself; no improbability in leading us to suppose, at the close of the play, that Chimène marries her father's slayer and lives happily for ever after! Such improbabilities could never have been conceived by any poet who understood the meaning of Aristotle's principle of Unity of Action in the imitation of Nature; but they proved no obstacle to the appreciation of the tragedy by an audience which accepted the artificial hypothesis with which the poet started, and mainly desired to have their own love of antithesis and rhetoric satisfied in a dramatic form of representation.

Far be it from me, as an Englishman, to speak with disrespect of the great dramatists of France. Viewed in their relation to the taste of French society, plays like *Horace, Cinna, Phèdre,* and *Athalie* seem to be marvels of dramatic skill and invention. My argument is that a society like that of France was incapable of conceiving tragic action like that found in the plays of Æschylus and Shakespeare. The action of the poetic drama in Greece and England was a reflection of widespread popular energy, of freedom of thought, speech, and deed, of national greatness and patriotism exalted by an inward sense of power and by the defeat of such foreign enemies as Xerxes and Philip II. No such inspiring air of liberty stirred the imagination of France in the seventeenth century. With what feelings would Louis XIV., retaining in his memory his youthful experiences of the Frondist wars, have witnessed on the stage the sufferings of legitimate kings, deprived, as in *Richard II.* and *Macbeth,* of their thrones and lives by the usurpation

of ambitious subjects? How would his monarchial pride have revolted against such a spectacle as King Lear, stripped of his last shred of authority, the sport of the elements, the companion in adversity of fools and madmen! What would the Jesuits have said to the daring doubts and speculations of Hamlet's conscience? Absolutism and centralization called for another order of dramatic exhibition in France. Driven from her free range in external Nature, the Muse of Tragedy retired into the recesses of the human soul, whose inner conflicts she might represent without rousing the political suspicion of king or cardinal. Yet even here she was haunted by the phantoms of her own self-consciousness. The overpowering sense of the authority of Aristotle, the anticipation of the verdict of the associated critics of the Academy, the oppressive idea of a dramatic standard formed by ancient models of unrivalled excellence, all these influences co-operated to make the French dramatist voluntarily fetter himself in his imitation of nature. The Law of the Three Unities is an illustration of the tendency in the French character, as developed by the history of France, to repress the liberties of imagination by the analysis of Logic.

As the French law of the stage is defined by Corneille in his *Discourse on the Unities,* so the law of French literary taste is expounded by Boileau in the *Art Poètique.* Critics are apt to undervalue poems of the class of Horace's *Ars Poetica* and Pope's *Essay on Criticism,* because they regard them as abstract treatises on taste, containing cold and commonplace maxims of composition; whereas their real interest and importance lie in the fact that they are declarations of law by a victorious literary party. The *Ars Poetica* and the *Epistle to Augustus* were manifestoes of the Hellenising party in Roman literature, directed against those who favored the rude facility of poets like Lucilius

and Plautus. The *Essay on Criticism* is an argument in verse against the taste represented by the metaphysical Poets of the seventeenth century in England. More suggestive than either of these poems, because more relentless and uncompromising, the *Art Poètique* stands out prominently as the final declaration of Law, by the literary representatives of the French bourgeoisie, in alliance with the Crown on the one hand, and with the Classical Humanists on the other, against the aristocratic literary party represented in the coteries of the *Prècieuses.* The artistic value of the apparently abstract rules formulated in the poem consists in their oblique way of reflecting on the practice of the Seudèrys, St. Amant and Pradon. The *Art Poètique* is the formulated expression of the law of French poetry, first recognized nearly a century before in the verses of Malherbe, whose praises Boileau so enthusiastically sounds. "Lastly," he says, "came Malherbe, the first in France to give an example of just cadence in verse, to show the power of a word in its right place, and to restrict the Muse to the laws of duty. Restored by this wise writer, our language no longer offered any rude shock to the refined ear. Stanzas learned how to close gracefully; one verse no longer ventured to overlap another. Everything approves the justice of his laws, and this faithful guide still serves as a model to the authors of our time. Walk in his steps; love his purity; imitate the clearness of his happy style."

What, then, was the ideal which Boileau, by his reasoning and illustrations, set before the French poet? The expression of Truth, Reason, Logic. The aim was not wanting in life and vigor. Genius, says the critic, at the opening of the *Art Poètique,* is indispensable, but the medium in which genius must work is good sense. "Tout doit tendre au bon sens." And again, "Good sense must prevail even in song." Hardly so deeply laid as the foun-

dation of Horace, "Scribendi recte sapere est et principium et fons," the rule implies that the standard of the correct imitation of nature is the lucid perception and logic of the bourgeois mind, aided by the refined manners of the court. "Etudiez la cour, connaissez-vous la ville." Above all, whatever subject is chosen, the poet must go to its essence, and not be satisfied till he has found the exact and perfect form of words required for the expression of the thought. Not a word about Beauty, Liberty, Imagination, Fancy. In every phrase we hear the voice of the stern proscriber, the Sulla of poetry, on the watch to put on the list for massacre some dangerous partisan of the Hôtel Rambouillet, who has managed to escape critical notice.

Boileau was well aware that Poetry could not dispense with the aristocratic element in language; and being at war with the principle favored by the social aristocracy, he sought to fill the void in his critical system by allying himself with the literary aristocracy of the Renaissance, and exalting the authority of the Greek and Roman classics. The principle was excellent so long as it meant no more than self-criticism by the highest standard of antiquity. But Boileau was almost inevitably carried into error by his logic. He regarded all the types of verse composition met with in the history of French literature as immutable moulds of thought; and he fancied that the classic propriety of each could be determined by settled rules. "Every poem," he says, "shines with its proper beauty. The rondeau, Gallic by birth, has the artlessness of nature, the ballad, strictly subject to its old maxims, often owes a lustre to the caprice of its rhymes. The madrigal, more simple and more noble in its style, breathes gentleness, tenderness, and love." Thus, in opposition to his own and Horace's teaching, that the form of poetry must necessarily adapt itself to the thought, he speaks as if poetry lay in

stereotyped forms of versification. In spite of his foundation of sound reasoning, he came insensibly to identify the imitation of Nature, under the guidance of good sense, with the mere external imitation of Greek and Roman poets.

Two examples will show the inconsistencies into which his logic betrayed him. Among the various types of poetry which he found himself obliged to define was the Eclogue. According to the dictates of good sense this form of poem must, he says, avoid the two extremes of pompous elevation on the one hand, and of rustic meanness on the other. An easy abstract rule; but what does it practically mean? "Between these two excesses," says Boileau, "the path is difficult. In order to find it, follow Theocritus and Virgil. Let their feeling compositions, dictated by the Graces, never quit your hands; turn them over by night and day. They alone in their learned verse will be able to teach you by what art an author may without meanness lower his style; how to sing of Flora and the fields, of Pomona and the woods; how to animate two shepherds to contend on the flute, to celebrate the allurements of love's pleasures; to transform Narcissus into a flower; to cover Daphne with bark; and by what art at times the eclogue invests the country and the woods with consular dignity." Would a poet who in Louis XIV.'s time acted obediently on these instructions have been imitating Nature according to the law of Good Sense?

Again, Boileau found himself much perplexed how to apply the principle of Good Sense to his idea of an epic poem. The epic, he says, sustains itself by faith and lives by fiction; therefore you cannot dispense in a poem of this kind with the machinery of pagan mythology. Hence it is impossible to write a Christian epic. "In vain," he says, alluding to the attempts in this direction of poets in the

anti-classic camp; "in vain do our deluded authors, banishing from their verse these traditional ornaments, strive to make God, the saints, and the prophets act like the deities sprung out of the poet's imagination, take the reader into Hell at every step, and introduce him to Ashtaroth, Beelzebub, and Lucifer alone. The awful mysteries of the Christian faith are incapable of gay and brilliant ornament. On every side the Gospel presents to the mind the spectacle only of Repentance and Judgment, and the inexcusable mixture of fiction gives to its truths an air of fable. What an object to offer to the eye, the devil blaspheming against heaven—the devil, whose aim it is to abase the glory of your Hero, and who often disputes the victory with God!"

True enough in its application to the feeble invention of Scudèry and his companions, a criticism like this only proves that the French were incapable of producing a great epic poem. It does not prove that there was anything fundamentally wrong in the conception of *Paradise Lost.* And the same rigid restrictive logic characterizes all Boileau's devices with regard to diction and versification—the exclusive use of the Alexandrine, the cæsura always in the middle of the line, the avoidance of the *hiatus* and the "enjambement," the choice of words to harmonize exactly with the movement of the rhythm,—all which are only the final declaration by the Academic dictator of the laws first promulgated by Malherbe. For the time the victory of Boileau and the ideas of the cultivated bourgeoisie over the party of mediæval Romance was complete. Nor was it a mere transient fashion of taste. For about one hundred and fifty years the Law of Classicism, as defined in the Art Poètique, exerted an irresistible authority. In spite alike of the half-hearted efforts of Voltaire to enlarge the liberties of dramatic action, and of the experiments of Diderot in sentimental comedy, the classic style, founded

on the Law of the Three Unities, reigned supreme upon the French stage through the eighteenth century. But it was a party triumph, a Pyrrhic victory, won by the vigor of a certain element in society, and liable to be reversed when the class from which the movement sprang lost its vitality. Undermined by the growth of natural science, by the philosophy of the encyclopædists, and by the sentimentalism of Rousseau, the imposing structure of French classicism fell almost at the first discharge of artillery brought against it by the Romantic party after the restoration of the Bourbons.

It is not to be denied that it deserved its fate. But at the same time it would be well for us Englishmen to examine very carefully the true lesson to be learned from the triumph of French Romanticism. The Law of Classic Taste in France could not have remained paramount for so long a period; its authority could not have been instinctively recognized by so many great creative intellects, or so clearly defined by a succession of able critics, if it had not represented something real and positive in the constitution of the French character. And looking at the matter historically, when we see that the idea of the manner in which Nature ought to be imitated in Poetry, as expressed in the Art Poètique, is actually embodied in the poems of La Fontaine and Molière, and that the idea of the structure and versification proper to the drama is the same in the tragedies of Racine and Voltaire as in the criticisms of Boileau, then candid minds will allow that, however narrow may have been the sphere of imitation, and however restricted the perception of harmony, both adapted themselves to an irresistible tendency of things in the development of French society. The great error of the Romanticists was that they ignored the existence of this historic law. As a revolt in the sphere of art and imagina-

tion their movement was fully justified, and nothing would have been easier for them than to show that a law of taste which might have been suitable for the times of Louis XIV. was quite unsuitable for the times of Charles X.

What the Romanticists wanted, however, was not a revolt but a Revolution. The rules, distinctions, practices, and traditions, which had been the result of so much ingenious thought and labor were to be swept away, and Poetry was to find for herself a basis in first principles, supposed to be entirely modern. What were they? The manifesto of the victorious Romanticists is to be found in the Preface to Victor Hugo's *Cromwell,* which founds its reasoning on this colossal generalization: "To sum up the facts we have just observed, Poetry has three Ages, each of which corresponds with an epoch of society: Ode, Epic, Drama. Primitive times are lyric, ancient times are epic, modern times are dramatic. The Ode sings eternity; the Epic solemnizes history; the Drama paints life. The character of the first kind of poetry is *naïveté;* the character of the second simplicity; the character of the third truth. The rhapsodists mark the transition of the lyric poets to the epic poets, as the romance-writers from the epic poets to the dramatic poets. Historians arise in the second epoch; chroniclers and critics in the third. The personages of the Ode are Colossi: Adam, Cain, Noah; those of the Epic are giants: Achilles, Atreus, Orestes; those of the Drama are men: Hamlet, Macbeth, Othello. The Ode derives its life from the ideal, the Epic from the grandiose, the Drama from the real. In a word, this threefold Poetry springs from three great sources—the Bible, Homer, Shakespeare."

The upshot of this reasoning is, that the end of the modern or romantic drama is to paint real character, and Victor Hugo tells us very naïvely how this was done in the case of *Cromwell.* He had for a long time accepted the

portrait of the regicide, painted by Bossuet, as true to life; but, happening to come across an old document of the seventeenth century, he discovered that the portrait did not resemble the original. The idea must therefore be corrected, and the proper place for correcting it was the Drama. Accordingly he read a vast number of books, from which he generalized the character of the man and his times, chose a dramatic moment in the life of his hero which would enable him to exhibit his real motives to the reader, surrounded him with more than sixty other *dramatis personae,* and finally completed the portrait of the character in a play which extended itself to about 12,000 lines. It seems, indeed, to have struck Victor Hugo that there was something paradoxical in the fact that a composition founded on æsthetic principles, in an epoch of the world in which the drama was the natural vehicle of imaginative thought, could not possibly be acted, and he made a half promise that, at some future time, he would adapt *Cromwell* for the stage. I am not aware, however, that he ever reduced his ideas to practice.

But what Victor Hugo did not perceive was that, while he professed to be sweeping away all French dramatic tradition, while he imagined himself to be imitating Shakespeare, and to be creating in a spirit of unfettered liberty, he was showing a complete ignorance of the principle on which Shakespeare's plays are constructed, and was unconsciously following, though with a variation, the stage principles of his predecessors. As I have already said, Shakespeare's method of dramatic creations, like that of the Greeks, is to reduce what was originally a well-known epic story into such a form as will please the imagination of spectators in a theatre; the method of the French playwright is to analyze an idea in his own mind and then to reproduce it in a dramatic shape. It matters not that the idea which Hugo

analyzed was that of a single man's character, while that which Corneille analyzed was a psychological situation; that, in *The Cid,* the spectacle to be contemplated is a conflict between Love and Honor, and, in *Cromwell,* the conflict of motives in the mind of a regicide; in both cases the imaginative process is the same, the logical combination of abstract ideas; in both cases the artistic result is fundamentally the same, a play depending for its effect on rhetorical speeches and epigrammatic points. This is the method of Seneca, not the method of Shakespeare.

Examine, again, the motto of another great standard-bearer of Romanticism, Théophile Gautier. His principle, "Art for Art's sake," seems to promise the artist unlimited liberty in imitating Nature, provided he is possessed of adequate skill. When illustrated by Gautier's own practice, however, his maxim evidently implies a determination to identify the methods of poetry with the methods of painting. Gautier endeavored to imitate Nature in words, exactly in the same way as the painter imitated her in form and color. Now, in a lecture on "Poetical Decadence" I fully admitted that the art of poetry included an element analogous to the art of painting, as may be plainly seen in the descriptions and similes of great poets like Homer, Virgil, Milton, Spenser, and Ariosto. Nor do I deny that Gautier's poetry abounds in admirable pictorial *tours de force,* such as the humorous picture, in his *Emaux et Camées,* of Winter as an old violinist. "With red nose and pale face, and with a desk of icicles, he executes his theme in the quartet of the Seasons. He sings with an uncertain voice old-world quavering airs: his frozen foot warms itself while it marks the time. And like Handel, whose wig lost its powder when he shivered, he makes the white sprinkling of snow fly from the nape of his neck."

But to confine the function of poetry, as Gautier did, to

word-painting is surely, in the first place, to form a meagre conception of the art, and in the second place, this supposed invention of the Romanticists is really nothing more than an application of the old classic law of Boileau, that the poet is bound to find for his verse the word exactly corresponding with the image in his mind. Turn to the *Lutrin*, and Boileau's picture of the Treasurer of La Chapelle in bed will furnish you with a brilliant sample of the word-painting which was Gautier's whole poetical stock-in-trade. "In the dark retirement of a deep alcove is piled a costly feather-bed. Four pompous curtains in a double circle defend it from the light of day. There, amid the calm and peaceful silence, reigns over the swan-down a happy indolence, and there the prelate, fortified by breakfast, and sleeping a light sleep, waited for dinner. Youth in full flower beams in his countenance; his chin descends by two storeys on to his breast, and his body, thick-set in its short stature, makes the bed groan beneath its lazy weight."

Do not the instances I have given furnish in themselves an answer to the reasoning of the Romanticists? Had these children of the Revolution possessed real self-knowledge they would have perceived that their most successful work was conceived in accordance with the old classical law, and they would have aimed only at such an amplification of that law as would give free play to their own gifts and genius. Unfortunately they were animated by a spirit not of comprehension but exclusion. The party of the Romanticists had gained the upper hand, and they were determined to proscribe and massacre the party of the Classicists as ruthlessly as the Classicists of the seventeenth century had proscribed and massacred the party of the *Précieuses*. Romanticism under Louis XIV. and under Louis Philippe was equally the protest of a faction against the inevitable tendency of things; but in the one case it was

the struggle of a social caste against the principle of Absolutism, in the other of a literary coterie against the principle of Equality. Just as Mlle. de Rambouillet and her friends sought to separate themselves from the vulgar world by the nicety of their manners and language, so did Théophile Gautier and his followers seek to shock the instincts of the bourgeoisie by their red waist-coats and outrageous verses." "For us," says Gautier, in his account of the Romantic movement, "the world divided itself into 'Flamboyants' and 'Neutral Tints,' the one the object of our love, the other of our aversion. We wanted life, light, movement; audacity of thought and execution, a return to the fair period of the Renaissance and true antiquity; we rejected the tame coloring, the thin and dry design, the compositions resembling groups of dwarfs, that the Empire had bequeathed to the Restoration."

To the foreign critic it seems that, as in French politics the centralizing principle has overpowered local liberty, so in French art the native tendency is for logic to prevail over imagination. Whatever literary party has been dominant in the taste of French society has sought to establish its supremacy by imaginative Analysis. The result has been to develop in the art of our neighbors great beauty of abstract Form, a splendid capacity of lucid expression, but more and more to turn away the creative impulse of the artist from the imitation of universal ideas of life and action. In the rival theories and practice of the modern French Naturalists and Impressionists I seem to detect, under a changed form, the old party struggle between the Classicists and the Romanticists. In one direction I see the disciples of Gustave Flaubert, by a new application of the precepts of Boileau, employing all the resources of precise and artistic language to decorate the sordid commonplace of bourgeois life; in another, M. Ana-

tole France, as the successor of Renan, arresting the transient impressions of his own mind in a succession of delicate phrases, which would have been the delight of the Hôtel Rambouillet. But, in both directions, Analysis undermines the conscience with the suggestion of subjects and ideas which lie at the very foundation of the Family and the State.

Must these things be? Is it impossible for the French novelist to contemplate Man under any aspect except that which involves some relation to his neighbor's wife? impossible for him to transport the imagination into the world of ideal action? Perhaps it may be answered that all the energies of the nation are concentrated in Paris, where lies its brain, and that Analysis alone can penetrate to the principle of life underlying the wild excitement of the Parisian Bourse, the gossip of the Parisian journal, the intrigues of the Parisian drawing-room. But Paris is not France; the poetry of the people, its historic soul and character, lies elsewhere. Turn away from the dissolving scene of life in the capital, with its superficial reflection of vulgar materialism, to the bypaths of rural France, where Nature pursues her ancient round in the midst of silent labor and elemental pieties. Pause in imagination, for example, in the valley of the Loire, as that noble river flows peacefully amidst historic battle-grounds; through walled towns, where every stone seems to recall some national memory—Orleans, Tours, Angers; through fields in which, here and there, peasants may still be seen, as Millet saw them, listening with bent heads to the voice of the Angelus; under gray châteaux which, perhaps, no longer tenanted by the descendants of their former lords, look down, at fixed seasons, on popular festivals celebrated around them since the Middle Ages—will any man of taste and imagination, viewing scenes like these in the light not of romance

but of history, and thinking of all the movement and animation of the present in its relation to the past, venture to say that Molière and La Fontaine would have found nothing worthy of imitation in the France of this century? Would they not have been able to show us in an ideal form, though it were but in comedy, how much of the historic character of their country has survived the conflict of thirty generations; how many of the primæval springs of national life combine to preserve the unity of French society; to what extent the ancient religion is still a moving power in the hearts of the people? Let it be granted that it is no longer the drama or the poem, but the novel, which is the vehicle of imaginative expression. Yet the novel also can be made the mirror of the ideal imitation of Nature, and the novelist who is able to give a reflection of the true morals and manners of France in the classic language inherited from Pascal and Mme. de Sévigné, will command an European audience as wide and appreciative as in the days of Louis Quatorze.

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PROBLEMS OF THE STUDY OF MODERN PAINTING

BY RICHARD MUTHER

(Translated from the German by Dr. George Kriehn, New York)

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OF the several works treating the painting of the century just passed which have recently appeared, we shall first consider the *Geschichte der modernen Malerei,* by Richard Muther (1893). This work for the first time attempted to give a general view of the entire activity in Europe during the nineteenth century. All painters were treated who had created works of real artistic value in France, England, Germany, Scandinavia, Italy, and Spain. If, in spite of such wealth of detail, the book has not quite solved the problem of presenting a clear picture of the artistic development of the century, this is to be attributed to the circumstance that it endeavored to unite incompatible things, and to be, at the same time, an historical and a controversial work. In the years in which it was written, modern art was fighting for its very existence. The author was enthusiastic and wished to take part in the struggle. The new ideals appeared to him so victorious, that a misguided enthusiasm for them led him to consider the earlier ideas more or less false. In reading the book one has the feeling of having climbed a high mountain, from which classicism, romanticism, and historical paint-

ing seemed gloomy ravines, through which it was necessary to pass in order to ascend. Only after reaching the summit one could breathe freely; for here all is bright, illumined by the rays of the sun of impressionism.

An artist defending his principles is, indeed, justified in such partiality, but not an historian. For he whose ideals we no longer accept is not, therefore, to be dismissed as antiquated and worthless. The actual is not necessarily the eternal, nor are present tendencies the only truth. Every artistic movement which has ever existed is justified within the bounds of the time of its existence, and, like other organisms, when its time has come, it will die a natural death. The historian should not battle for a cause, either as accuser or defender; his proper position is rather that of a mere recorder.

In this spirit Cornelius Gurlitt approached the great theme in his work, *Die deutsche Kunst des* 19 *Jahrhunderts* (1890). He never blames or condemns, but, effacing the personal element, he enters into the spirit of the past, not in order to glorify our present achievements, but to mete out justice to every sincere and inspired effort. For objectivity and impersonal appreciation, Gurlitt's history cannot be surpassed. If, notwithstanding, the reader, after the perusal of the book, has the feeling that the artistic development of the present is to-day less clear than that of the past, this must be ascribed to another reason. The author takes his phenomena as he finds them; and although he analyzes and weighs them, he never inquires after the causes. He neglects to examine the soil from which the art of every age springs, which after all is the first and most important thing in historical writing. For history is not a storehouse of accidental occurrences, but the result of inevitable laws which affect each other in all directions. The problem is to find the point of view which commands

the whole stream or tendency, and from which its component parts may be arranged into comprehensive groups. As we rightly explain the works of Giotto, Botticelli, and Raphael from the time and circumstances under which they arose, we must also treat modern art as a natural problem, by deducing the character of its works and the changes of style from the historical changes in culture during the nineteenth century.

It will first be necessary to cast a glance at the eighteenth. For this love-crazed and blood-shedding, this trifling and fighting century is the mighty period in which the old world passed away, and the foundation was laid upon which we are to-day building. With what seven-league boots did the spirit of the age then sweep over the nations, and with what dreadful harshness did the opposing forces crash into each other! "Vive la joie!" Such was the device at the beginning of the eighteenth century. With what feverish joy the old aristocratic families of the *ancien régime* celebrated their rococo! The whole world seemed to have become an Isle of Cythera, where nothing of the sorrow of life could enter. But while the distinguished gentlemen and ladies, disguised as Pierrots and Columbines, celebrated their gallant shepherd masquerades, rough voices suddenly sounded in the midst of their cooing and whispering. Threatening symptoms announced that the long and beautiful day of the aristocratic order must end, and that the plebeian also demanded a seat at the table of pleasure. The great writers of all countries were the bold heralds of the battle. In proclaiming their thoughts of a new religious and social progress, they sowed the seed which ripened at the end of the century. In 1789 the die was cast, and the Revolution completed what literature had begun. "Après nous le déluge," so lightly expressed by the Marquise de Pompadour, became an awful truth.

Naturally the events which at that time shattered the old world into ruins also exercised a deep influence on art. Glancing for a moment at the days of the Renaissance, we find art supported in the main by two powers, the church and royalty. Raphael and Michelangelo, Correggio and Titian, Velasquez and Rubens,—they all created their most magnificent and monumental works either for the church or for the princes of their country. With the close of the eighteenth century these two powers ceased to be factors which determined the character of art. In Germany Kant wrote his *Kritik der reinen Vernunft,* showing that God, who, according to the teaching of the Bible, had created man, was in the light of philosophy a mere idea created by man. In France also the Almighty was dethroned, and the Goddess of Reason was raised in his place. The church thus lost the inspiring power which it formerly exercised upon art, and, although during the nineteenth century religious pictures were still painted, their very small number serves to show how far an age of investigation in the natural sciences has deserted the cycle of ideas in which human thought formerly moved. The close of the eighteenth century was no less fatal to the kingly power which ruled by divine right. A constitutional king no longer has the means to be a Maecenas in a grand style, as was Louis XIV., and even if he could command them, his commissions could be of no avail to art, because they would contradict the modern view of life. The painting of our own days can no longer permit itself to be made a herald of royalistic ideas.

Now it is a characteristic of art that it can only flourish upon the basis of a quiet, clarified culture. But this clarified culture of the past had been destroyed by the Revolution, and modern culture was still in a state of formation, so incomplete and full of contradictions that it could not yet

serve as a basis of a new art. Only when the spirit of an age has been clearly formed can art incorporate it in tangible form. Such was not yet the case at the beginning of the nineteenth century; and this explains what seems at first sight the remarkable circumstance, that painting, which had previously been an expression of its own epoch, now placed itself in opposition to this epoch. The eye of artists was fixed not upon their own time, but upon the past. They thought to produce better art by glorifying the beautiful culture of former centuries.

The painting of the first half of the nineteenth century was, therefore, in the main retrospective. At first the subjects were taken from the old Hellenic world, and later artists became absorbed in the fables and legends of the Middle Age. Then, in further course of the development, they proceeded to modern times, and there came a period of historical painting which found its chief aim in glorifying, in large paintings, rich in figures, the principles and political actions of the sixteenth and seventeenth centuries. The painters of *genre* and of landscape also accommodated themselves to this point of view; for the latter did not paint nature as it existed before their eyes, but sought rather, in a reconstructive manner, to revive the vision of the earth as it appeared in the days of ancient Hellas or of the Middle Ages. The *genre* painters did not exhibit the people of the present; rather, in their peaceful painting of peasants, they depicted an idyllic world, which, like an immovable piece of the past, had survived in modern life. Paintings were not conceived as representations of the present, but as hymns of praise of the good old times. The windows of the studios were hung with heavy curtains to avoid seeing anything of the ugly world without.

Yet events were gradually taking place which caused the artist, instead of lingering in the past, to turn his eyes

to the present, and to paint not only the world of long ago, but the world of his own day. The most important of these events were certainly the great changes in transportation which have taken place since the forties. Until that time the coach had lumbered heavily from village to village; now the steamship and the locomotive established rapid connection between the most distant parts of the earth. The world came under the influence of this traffic, and it would have been strange, indeed, if painters had not made use of the possibilities of travel thus made so easy. They took up the wanderer's staff and became globe-trotters, traversing in every direction the Orient, Scandinavia, and even America. In numerous *genre* paintings they recounted the manners and customs of strange people, and in numerous landscape pictures they exhibited the sights of the Universe,—

Wenn jemand eine Reise tut,
So kann er was erzählen;

such is the content of these pictures.

While artists were thus wandering in distant countries in order to depict an exotic nature, there occurred contemporaneously another event which caused them to occupy themselves with what was going on in their own home and their immediate neighborhood. The great social problem of the nineteenth century arose after the revolution of 1789, which had been a struggle of the people against feudal despotism; the fruits of these struggles fell into the lap of the bourgeoisie. The federal knights had been followed by knights of fortune, and a chasm yawned between bourgeoisie and proletariat, between the possessors of property and the poor. The year 1848 passed like a threatening storm over Europe. When the workmen were fighting behind barricades, many of the painters felt the need of tak-

ing part in these struggles. Searching in the slums and tenements, they made their brush a weapon with which they entered the lists for the rights of the disinherited. "The lot of the poor is pitiful," such is the refrain that runs through their paintings. The fame of having been warm-hearted friends of mankind cannot be denied these artists. They proved that art cannot be joyful when life is serious, and they fought for noble aims with worthy intentions. Unfortunately, however, their paintings can no longer afford us a pure, æsthetic pleasure, because the intention is better than the execution. Occupied only with the thoughts they wished to express, all these tribunes of the people neglected beyond measure the purely technical side of their art.

With these tendencies we approach a difficult question, but one of great importance for the future development of modern painting. For what is true of these apostles of humanity is more or less true of all who wielded the brush in the first half of the nineteenth century. They were less painters than disguised *literati*. The value of their paintings consisted more in what they studied than the manner in which they rendered it. It is easy to explain the literary spirit which at that time dominated painting. With the close of the eighteenth century, the bourgeoisie became the principal purchaser and the most important patron of art. In these circles purely æsthetic needs did not yet exist. They could only understand art is so far as it served culture, and therefore demanded of pictures the representation, in epic breadth, of interesting things which could be read from them. It was not thus in former centuries. During the rococo period men surrounded themselves with works of art only in order to enjoy their beauty. They knew that a picture could play upon the filaments of the soul through the noble language of line and the power

of color to awaken feelings akin to those caused by music. But in the nineteenth century this purely sensuous joy in the beautiful had to be awakened again. It had to be brought home to the general consciousness that painting was not an appendix of literary culture, but an independent art which ruled a mighty realm, that of beautiful form and beautiful color.

The painters of the succeeding generations felt the need of treading this path. They desired to show by their works that it was not the function of the artist to relate, amuse, or teach, but only to paint in the best manner possible. But how and where should they begin? Under the tutelage of the literary, the purely artistic taste had greatly suffered. The prerequisite of artistic production, therefore, was to refine this taste; and this could be best accomplished by seeking advice from the classic painters of the past. With the middle of the century, modern painting, accordingly, entered upon the second phase of its development. Artists began now to examine, technically and æsthetically, the works of classic painters, and sought to paint pictures which, in technical excellence, should not be inferior to theirs. This originated a systematic study of the colors used by the old masters.

These painters, also, may be classified in accordance with the models they chose. There were some who preferred the rugged and angular masters of the *quattrocento;* others who endeavored to acquire the light and shade of the Venetians of the sixteenth century; others, again, who became absorbed in the works of the little masters of Holland during the seventeenth century; and, finally, others who delighted in the bold brush-work and the dark tones of the Neapolitans of the baroque period. The result of these studies was an exceedingly important one. A whole generation of painters in all countries of Europe had made it a

lifework to discover the secret of color possessed by the old masters; and they consequently commanded in virtuoso fashion all the technical means of the past. All of their works are pleasing on account of their cultivated, distinguished beauty, reminding us of the old masters.

But was the goal actually reached when the power was gained to imitate the old masters to the extent of actual illusion? Had these old masters themselves been in their turn imitators, or is not the wealth of varied beauty created in former centuries to be explained rather by the circumstance that every artist dared to trust his own eye and his own feelings? This independence had not yet been attained by the moderns. There existed a contradiction between the modern subjects which they represented and the style of the old masters in which they represented them. Examining their paintings, we may well ask whether the movements of modern man are actually represented, or whether they are not a slavish repetition of the positions and gestures which are found in the old masters. Does the arrangement actually express the surging activity of modern life, or is not everything forced into a scheme of composition prescribed long ago? The color deserves a special attention. The old masters observed carefully the conditions of lights under which they labored. They painted their pictures in studios into which the light penetrated through small bull's-eye panes, and their paintings were destined partly for gloomy chapels in great churches, partly for narrow rooms paneled in brown wood, into which the light of heaven fell softly through stained glasses.

In the nineteenth century life has become brighter. Through large panes of glass the light streams full into our rooms. Furthermore, the great physical achievements of the nineteenth century have brought wonders of light before which an old master would have stood speechless.

When they, or even when our grandparents lived, there were only candles and oil lamps; to-day we have gas and electricity. It is magical to see the gas-lamps throwing their flickering rays through bluish twilight; to observe the light of electricity flood a salon and mingle with the soft rays of a lamp. From all these wonders of light of the new age, painters had heretofore kept fearfully at a distance. They labored in the regular transom light of their studios, and even softened this by means of curtains and draperies, in order that it might most nearly approach the conditions known to the old masters.

The succeeding generation of painting, therefore, saw itself confronted by three great problems. Whereas formerly modern men had received a pose studied from old painters and ancient statues, the problem now was to seize upon the movements of actual life. Whereas formerly the works had been composed in accordance with a rigid scheme, it was now proposed to present real life in a picture, without doing violence to it or forcing it into the narrow prison of traditional rules. Where formerly the dark color-schemes of the old masters had been projected upon subjects of modern life, it was now proposed to substitute for this "brown sauce" the fresh brightness of nature, and to record all the wonders of artificial light which the age of electricity and gas had produced.

From two sides the painters were strengthened in this tendency. In the first place, an event of great consequence occurred in the discovery of Velasquez, on the occasion of an exhibition of his work in private possession held at Paris in honor of the two hundredth anniversary of his death. While artists had until now been only familiar with the dark masters, they here made the acquaintance of a light one. For the tone of his pictures is not a brown, but a cool pearl gray. An old master, therefore, had al-

ready painted nature as they were now beginning to see her, and it is always important for new truths to find classical verification. Of no less importance was the influence of the art of Japan upon the course of the development of European painting. At the beginning of the sixties there had been a heavy importation into Europe of colored prints, the study of which acted like a revelation. Here, too, everything that painters sought was expressed in classical perfection. They marveled at the spirited and lively arrangement of leaves, in which all architectonic balance was lacking, but which, just because of this symmetry, had an effect as realistic as if nature itself had improvised them. They were impressed by the surety with which the Japanese seized upon the most rapid motion; things which the European had learned to see only by means of instantaneous photographs were here presented with boldest directness. Finally, they marveled at the color-effects. What fresh brightness, and at the same time what beauty of tone, was possessed by these magical prints; red and green trees, glowing lanterns, the yellow sickle of the moon, twinkling stars,—everything was represented, and nowhere a false note; everything held together by that wonderful harmony which had formerly been attempted by a false tuning to brown. Thus did Velasquez and the Japanese contribute to the origin of modern impressionism.

Freedom from the great dead have been thus won, an independent representation of entirely new impressions became the aims of painters. Especially did they try to solve all the problems of life which had formerly been so timidly avoided. After they had been so long painting in brown, they found the wonders of *plein air* so attractive that for several years only scenes in the open air were painted. Rays of sunlight which flutter blinkingly through the treetops, great green meadows bathed in sunlight, the glim-

mer of glowing air, the play of a spot of light on the water and on yellow sand—such were the most popular subjects. After they had learned to paint sunlight, other problems received their turn. They attempted to depict the foggy freshness of morning and the sultry vapor of the storm, the mysterious night scenes and gray twilight. Upon open air pictures followed others representing the movements of light indoors with a delicacy previously not thought of. Lastly came the wonders of artificial light, those phenomena which the last quarter of the nineteenth century, with its unheard-of improvements in the entire lighting system, has brought about. It may, indeed, be said that never before have light-effects of such subtility been recorded in pictures.

And to-day? Well, every art suffers from the defects of its qualities. The impressionists had discovered air: for it they neglected line, since in atmosphere the outline disappears. They had discovered light: for it they had, in a certain sense, neglected color, since color is disintegrated by light, and the colored surface is dissolved into a conglomeration of differently colored luminous points. The impressionist delighted also in the most subtle nuances of tones dissolved in light; but in eliminating from their works all pregnant lines and all pronounced colors, they destroyed, in many respects, the decorative effect of their pictures, which, from a distance, often had the effect of indistinct violet and yellow chaos. And so towards the end of the century, another new problem appeared, how to progress from the purely artistic to the decorative.

Modern painting had concerned itself very little with this problem. In reviewing the products of classical art, it will always be found that the old masters carefully weighed the relations of the picture to the space it was destined to occupy. The mosaics of Ravenna and the frescoes of Giotto were intended to fill the whole church

with solemn harmonies and to be effective from every point of view, even from the greatest distance. Therefore, purely decorative artists like Giotto used only great, impressive lines, and arranged mighty complexes of color in accordance with simple decorative laws. All naturalistic effects are avoided; all belittling detail, as well in the fall of the drapery as in the structure of the landscape, is eliminated; only the clear silhouette speaks. The pictures must be visible from a distance, and at the same time correspond, in all their lines, with the lines of the building.

Quite a different sort of painting arose in the Netherlands at a later period. In abrupt contrast to the monumental work of the Italians, the small pictures of Jan van Eyck are painted stroke by stroke, with minute exactness; the stubble of the beard, every vein of the hand, every ornament of clothing, is rendered with naturalistic accuracy. Jan van Eyck could indulge himself in such fine brushwork, because his pictures made no pretense of effect at a distance, but, like the miniatures of the prayer-books, were destined to be inspected at close quarters. They were altar-pieces for domestic use, before which the observer, after he had drawn away the curtain, knelt or stood. In like manner we may explain the style of later Dutch cabinet pictures. Placed for the most part upon easels, they hinted to the spectator that their delicacies could best be seen by close inspection. Even when they served as decoration for a wall, the delicate work of a Dou or a Mieris was calculated in accordance with the proportions of the small Dutch rooms. If any of these Dutchmen, as, for example, Koning, exceptionally received a commission in Flemish palaces, he immediately changed his style; for he knew that a picture for a large room must be differently treated, not only in style, but also in composition, from his accustomed work.

The weakness of the nineteenth century was most clearly revealed in the circumstance that it had lost every feeling for the relation of the picture to space. What awful performances did not mural painters perpetrate in our public buildings! In accordance with the literary trend of painting of the first half of the century there was no thought of beauty in form and color, but only of the didactic value of the works. Instead of proceeding on the supposition that a picture should really adorn, they endeavored to give historical instruction to the public, and tacked historical *genre* paintings on the walls. As to art in the home, we have not yet forgotten the time when small photographs and line engravings, instead of being kept in portfolios, were fastened to the walls, where they naturally had the effect of dead white and black spots. Museums and exhibitions also contributed to confuse public taste by juxtaposing the most heterogeneous things on the walls: little cabinet pieces of Brouwer and Ostade alongside of a great altar-piece by Reubens, and a mighty Delacroix flanked by dainty Meissoniers. In this way the feeling for the decorative importance of art was more and more lost. The purchaser was not astonished when a picture, which he had admired at the exhibition, looked like a hole in the wall or like a monotonous dirty brown spot, when seen from a distance in a large room of his home.

The change for the better was first seen in the domain of mural painting. Almost contemporaneously in all countries, tendencies appeared, the object of which was, by means of the clear arrangement of the complexes of color and line, to restore the mural picture to its place as a decorative element. But the panel picture was also reminded of its decorative purpose. Our rooms are not only brighter but more spacious than were the small and dimly lighted Dutch rooms; and it was only a sign of a lack of

originality in modern painters, notwithstanding the changed conditions of light and space, to hold fast to the manner of the old masters. Impressionism first brought the colors into harmony with the brighter light-effects of our rooms, and neo-impressionism supplemented this by paying the greatest possible attention to distant effects. It is, indeed, astonishing how impressive these dotted paintings are. The little dots, at close view a gaudy chaos, when seen from a distance shape themselves into such plastic forms, that neo-impressionistic paintings overlook the widest rooms. Pointillism (in which the surface of the picture is not smooth, but composed of little elevations and depressions) contributes further to this effect; for, by reason of their rough surface, the paintings, like the old mosaics, are effective from every point of view. Numerous masters have sought to reach the same goal of monumental decorative effect by other means, such as the simplification of form by the effect of harmonious spots of color, and by the subordination of color to decorative purposes.

But it cannot be denied that this latest art, in so far as it is good, still stands in intimate connection with impressionism. After impressionism had taught painters how to catch the finest nuances of motion and expression, an entirely new language of line was the result of their reversion to the principle of style, and of the reduction of the thousand details which they had learned to see anew to their simple and significant original forms. In observing with scientific accuracy the effect of light on color, impressionism also discovered a wealth of new shades of color. We now distinguish a hundred values where formerly we saw only one. Expressions like red, green, and brown have become meaningless for the manifold infinitely differentiated values of color. Consequently, when artists proceeded from the realistic rendering of their impressions of

nature to free symphonic composition in the colors which impressionism had discovered, there arose wealth, harmony, and softness of color, not hitherto achieved. Such, in its principal stages, is the course which painting has traversed from the beginning of the nineteenth to the dawn of the twentieth century.

CORNER STONES OF THE MODERN DRAMA[1]

BY HENRY ARTHUR JONES

[HENRY ARTHUR JONES, dramatic author. b. Grandborrough, England in 1861; produced his first play, *A Clerical Error*, in London, in 1879; made a great hit in 1882 with his melodrama, *A Silver King*, which was written in collaboration with H. Herman, and had a long run both in London and New York. This play was followed by many other successes, noted for cleverness of dialogue and stagecraft, and which were mostly comedies and dramas reflecting various social phases of modern life. His plays include *The Middleman*, *Judah*, *The Dancing Girl*, *The Tempter*, *The Crusaders*, *The Masqueraders*, *The Physician*, *The Case of Rebellious Susan*, *Saints and Sinners*, *The Triumph of the Philistines*, *The Rogue's Comedy*, *The Liars*, *The Manoeuvers of Jane*, *Mrs. Dane's Defence*, and *The Evangelist*. He has delivered lectures on the Drama both in England and the United States. AUTHOR OF *The Renascence of the English Drama*.]

LET the first words I speak be those which shall most frankly and heartily own my great debt of gratitude to American playgoers. If to-day I am free from pressing, sordid cares, it is largely due to the continued favor which your nation has shown to my plays. For nearly a quarter of a century my work has been seen in all your leading cities, and every year has been a year of welcome and encouragement on your part, and every year has been a year of renewed and increasing indebtedness on mine. A few weeks ago America received my last play with an unparalleled generosity of enthusiasm. Such a welcome as was then given me I can never forget. But it leaves me still more hopelessly in your debt. I cannot pay. Let me, then, simply own my insolvency, and offer to you and through you to the great body of American playgoers, my most inadequate, but most deeply felt, most lasting, most sincere gratitude.

[1] A lecture originally delivered in Sanders' Theatre, Harvard University, and presented here to supplement the lectures originally prepared for the International Congress of Arts and Science.

A friend of mine in England pardons himself any lapses from general truthfulness by affirming as a splendid compensation, "I never tell lies about art." I believe that a clear vision and a high sense of rectitude in all the arts would develop a new sense of national beauty and national dignity both in America and in England, and would also be a valuable lever to both nations in matters of conduct and character. I am persuaded that this clear vision, this right-thinking and right-doing in the popular art of drama, would have a wide, compulsive influence on national manners and behavior. Therefore, I hope you will allow me to adopt my friend's motto and to say, "I never tell lies about the drama." I am sure you would wish me to deal with this subject with the utmost candor and courage, to speak out of the fullness of my heart. And if I tell you some hard truths and ask some harsh, rude questions, you must not think that I am exceeding the liberty and courtesy of a guest; for the same hard truths must be told, and the same rude, harsh questions must be asked about the drama in England. Indeed, I hope you will allow me for the moment to class England and America as twin nations in the affairs of the drama. So much interchange of plays and actors has taken place between the two countries; the means of communication have been so constantly quickened and increased, that now, for many years past, large currents of the two main streams of national drama have filtered through to each other, and have commingled, and are now flowing together.

In the higher reaches both of the modern and of the poetic drama, England and America may be largely reckoned as one country. Therefore, I am not speaking simply to and for American playgoers. I still remain your debtor, and at the outset I must own that if you had a National American Drama such as I desire for you, such as I see

many signs of your compassing in generations to come—I say, if that National American Drama were already an accomplished fact, I fear you would not so readily have welcomed my plays for the last twenty-four years, and I fear you would not care to listen to me now.

If we throw one sweeping glance over the whole past history of the drama, we are deeply impressed by two main, commanding features. The first of these is the perennial and universal existence of the dramatic instinct, always and everywhere seeking expression, always and everywhere pushing up its shoots into the national life. Often repressed, often debased, often childish, often vulgar, often obscene, often the emptiest, silliest bauble, formless, ribald, violent, grotesque, a feast of indecencies, or a feast of horrors, there has yet rarely been a time, or a country, where some kind of a drama has not been fitfully and precariously struggling into existence. That is the first main feature in the world's dramatic history.

The second main feature is inverse and complimentary. Twice in the past the Drama has splendidly emerged, has seized, possessed, inflamed and interpreted the whole of the nation, has become the supreme artistic achievement of the age and people. Twice it has thus emerged—once in Greece, and once in Elizabethan England. But a Frenchman would say that three times, and a Spaniard would claim that four times in the world's history have there been great creative outbursts of drama. Well, we who possess Shakespeare will generously allow that there have been four such great creative outbursts which have left standing these lowering mountain ranges of drama for us to wonder at. France, in the seventeenth century, was the scene of the last of these great creative outbursts, and the incomparable Molière was the head and front of its glory.

This brings me to the purpose of my lecture, which is,

indeed, to ask this practical question: "By what means can a worthy art of the Drama be fostered and developed in America and England to-day?" I think we may best get an answer to this question by comparing the history and status of the Drama in France and in England from the time of Molière down to the twentieth century—down to the modern Drama of the day before yesterday.

Here I must beg time and space for a rather long but quite relevant parenthesis. No glance at any corner of the Modern Drama can leave out of sight the ominous figure of Ibsen. A great destroyer, a great creator, a great poet, a great liberator, in his later prose plays he has freed the European drama, not only from the minor conventions of the stage, such as the aside and the perfunctory soliloquy, but from the deadlier bondage of sentimentality, of one-eyed optimism, and sham morality. As there is no modern playwright who understands his craft that does not pay homage to Ibsen's technique, so there is no serious modern dramatist who has not been directly or indirectly influenced by him, and whose path has not been made clearer, and straighter, and easier by Ibsen's matchless veracity, courage and sincerity. Throughout these later plays, again and again he shows us how far more poignant and startling are inward spiritual situations and the secret surprises and suspenses of the soul than outward physical situations and the traps and surprises of mechanical ingenuity.

Like all the greatest artists, he is greatest, not where he is most realistic, but where he is most imaginative. It is true he does not reach through the middle zones of cloud and tempest; he does not attain those sunny heights of wisdom and serenity where Sophocles and Shakespeare and Goethe sit radiantly enthroned, watching all the turbid stream of human life as it flows a thousand leagues beneath their feet. Ibsen for the most part looms darkly through

a blizzard, in a wilderness made still more bleak and desolate by the great lava streams of corrosive irony that have poured from his crater. Yet by this very fact he becomes all the more representative of his age, and of the present cast and drift of European thought and philosophy. His generation has heard and received his insistent new gospel, "Live your own life." But human hearts will always long for that strain of higher mood which we seem to remember, "Whosoever shall seek to save his life shall lose it; whosoever shall lose his life shall preserve it."

Ibsen is a citizen of a small country; this gives him many signal advantages and some monstrous disadvantages. If his eyes avert their ken from half of human life, yet his vision is the more keen and strenuous for the half that lies before them. If he is a sour and shabby courtier to beauty, he is never a traitor to truth. He will never be surpassed in his angry scorn for lies. He has great fascination, but little charm. Joyous youth will never hobnob with him. For happy lovers he grows no sweet forget-me-nots. The poor in spirit he crushes. They who have rooted themselves at ease in the rank stubble of modern commercialism shudder at him, as a weed at the plowshare, as a cancer at the knife. For two-thirds of humankind he has only a command of self-contempt and a sentence of despair and destruction. But the strong he fortifies; the steadfast he establishes; he is a scourge to slaves, but for them that are free he enlarges the bounds of freedom. They honor him who honor the truth, and they welcome him who welcome the growl of the thunder and the dart of the lightning rather than stagnancy and miasma and the fitful shimmer that dances around corruption.

A test of Ibsen's quality is supplied by the characters of the men who have most hated and villified him. Some tribute may, perhaps, be offered, belated, but I hope not

too late, by those whom his tense and shattering genius has at length conquered and brought to own with great regret that they have in part misjudged, in part underestimated him. He will long stand forth, a frowning landmark in the domain of the Drama. Weak creatures may now be counseled to shun him, and to cease from cursing and shrieking at him. He remains.

But at present Ibsen, by his circumstances, by his character, by the nature of his genius, by the language he wrote in, abides a solitary figure, and, though he has alarmed and shifted the whole Modern Drama, he stands mainly apart from it. And that we may get an answer to my prime question: "How can we foster and develop a worthy art of the Drama in America and England to-day?" I must take you back to a comparison of the history of the Drama in England and France during the last 250 years.

Let us look at England first. Immediately after Molière we have Dryden and the brilliant and corrupt Restoration Comedy, largely drawing its inspiration from France and Molière. But our leading Restoration Dramatists had not the immense advantage of Molière's practical acquaintance with the theatre, and their plays, compared with Molière's, are badly and loosely constructed. Further, there is a profound, instinctive, all-pervasive morality in Molière. Molière's morality is sure, intrinsic, inevitable; like Dante's, like Ibsen's, like nature's morality. Our English Restoration Comedy is arid, heartless, degrading; essentially mischievous, corrupt, and depraved. Our love for Charles Lamb must not tempt us for a moment to accept his ingenious and audacious excuse for Restoration Comedy. We will not withdraw our censure from these Restoration heroes and heroines on the curious plea that they are fairy rakes and harlots living in a fairy land of cuckoldry. In spite of Charles Lamb we will, if you please, very heartily and

wholesomely condemn them, and feel all the better and more self-righteous for having done it. Our Restoration Comedy, then, has vanished from our stage on the score of bad construction and bad morality; more, I fear, because of its bad construction than of its bad morality. But though the Restoration Comedy no longer holds our stage, the splendor of its wit, and the vividness of its portraiture of town life insure it a lasting place in English Literature.

Since the Restoration Comedy, what place has the English Drama held in English Literature?

I was dining the other night with a book-collecting friend. He brought out first editions of "The Rivals," "The School for Scandal," and "She Stoops to Conquer." "There!" he exclaimed, "that's all the harvest of your English Drama for the last 200 years." Those three little volumes were all that a wealthy collector thought worthy to preserve of the dramatic art of the Anglo-Saxon race in the past 200 years—that Anglo-Saxon race which during that same 200 years has held sovereign sway and masterdom in Literature, in Science, and in Arms, which once held the sovereignty of the world in Drama; a race of restless and inexhaustible achievement in almost every field; a race of action, and therefore, essentially a dramatic race; a race whose artistic instincts would irresistibly find their natural and triumphant outlet on the stage. And in 200 years all that the Anglo-Saxon race has produced of drama worthy to be preserved as literature is contained in those three tiny volumes. Why have we made such a beggarly mess of our Drama?

Now, if we turn from England to France and survey the French Theatre and the French Drama, we shall find that there has been an almost continuous stream of great writers for the stage from Molière onward to the present time. In the seventeenth century, Molière stands not only at the head

of the French Drama, but also at the head of French Literature, holding the same relative place as did Shakespeare in England half a century earlier. If France were asked, "Who of your sons since Molière dare claim the garland of eternal and universal renown? Who in your later days is fit to stand in the circle of Homer, Virgil, Dante, Shakespeare, Milton, and Goethe?" if France were asked that question, I suppose she could only send in the names of two candidates—Voltaire and Victor Hugo. But these, her two most famous men of letters in the eighteenth and nineteenth centuries, are also her leading playwrights.

As Molière in his century headed both literature and drama, so do Voltaire and Victor Hugo in theirs. But what a crowd of illustrious companions swarm around these great men! Look down the long list of them—Regnard, Marivaux, Beaumarchais, Dumas, Alfred de Musset, Casimir Delavigne, Dumas *fils,* Augier, Labiche, not to mention half a dozen living writers who are yearly throwing out powerful dramas, dealing faithfully, sincerely, and searchingly with the vital characters, scenes, and issues of our modern social life. Take the long list of French writers of the first rank, and you will scarcely find one who has not been more or less successful on the stage.

The French Theatre has not been merely in constant touch with French Literature; the French Theatre and French Literature have been wedded to each other for the last 200 years, bone of one bone and flesh of one flesh. Every play by a leading French playwright is not only eagerly discussed and judged in the theatre; it is immediately published and eagerly discussed and judged as literature. A year or two ago I remember taking up at a little wayside French book-stall a copy of the two hundred and eightieth thousand of "Cyrano de Bergerac."

Further, during those two centuries, there has been a

constant method of training actors and actresses. Acting is known to be a great art in France. The all-round performance of a strong emotional play in Paris is immeasurably above the all-round performance of a strong emotional play in London; while the exhibition of quite amateur performers in leading parts, such as is not rarely seen on the London stage, would be a thing disgraceful or impossible in any leading city of France, to say nothing of Paris. Again, in France the Drama is reckoned as a fine art, and is judged on that level; that is, as a means of providing amusement by the representation and interpretation of life. The French are a nation of cultivated playgoers alert to seize the finest shades of the actor's and the author's meaning. In England the great mass of playgoers have lost all sense that the Drama is the art of representing life, and go to the theatre mainly to be awed by scenery, or to be tickled by funny antics and songs and dances that have no relation to life, and merely provide a means of wasting the evening in entertainments not far removed from idiocy.

If the English Drama for 200 years makes a beggarly show when looked at by itself, how abject and meagre and utterly despicable does it appear when compared with the Drama of France in the same period. Once more we are brought around to the question, "What are the causes of the present pitiable condition of the Anglo-American Drama to-day?" Again I claim that the Anglo-American race is naturally and instinctively a dramatic race; a race of action; a race fitted for great exploits on the outer and larger stage of the world's history, and also for great exploits on the inner and smaller stage of the theatre. We have proved our mettle on both stages. We hold the world's price for Drama. Why, then, are we so far to seek? Why are we lagging behind in this our own native art of the Drama, where by right we should lead the other

nations at our heels? How is it that these three poor thin volumes of plays are all that we have to show for 200 years, while of living, serious, operative Modern Drama to-day America and England have barely a fragment that will stand the final test of a quiet hour in the study?

The fundamental reason is to be found in the character of our race. We are a dramatic race; we are also a deeply religious race. Religion easily runs riot to fear and meanness and madness, and creates abominable hells in its panic. After the mellow pomp of the Elizabethan age Religion ran riot in England. We owe the imbecility and paralysis of our Drama to-day to the insane rage of Puritanism that would see nothing in the theatre but a horrible, unholy thing to be crushed and stamped out of existence. Let our Puritan friends ask themselves how far their creed is responsible, by the natural and inevitable law of reaction, for the corruption of the national Drama at the Restoration, and for its pitiable condition ever since. The feeling of horror and fright of the Theatre, engendered at the Restoration, is even to-day widely prevalent and operative among religious classes in England and America. It muddles and stupefies our Drama, and degrades it from the rank of a fine art to the rank of a somewhat disreputable form of popular entertainment.

I have pointed out what I believe to be the underlying cause of the intellectual degradation of the Anglo-American Drama to-day. But attendant on this primary cause are those other secondary and resultant causes and signs of degradation which we have glanced at in comparing the English and French Drama. I will repeat them in the order of their importance.

I. The divorce of the English Drama from English Literature, of which it is, indeed, the highest and most difficult form, and of which it should be the chief ornament.

Accompanying this divorce of Literature and the Drama is the contempt of English men of letters and literary critics for the Theatre; their utter ignorance of the difficulties of the dramatist; their refusal to recognize the modern Drama as literature, which refusal again reacts upon the dramatist, and tends to lower the quality of his work, inasmuch as he is left without encouragement and without any appeal to high standards of literature and good taste.

II. The general absence from the English Theatre and from modern English plays of any sane, consistent, or intelligible ideas about morality, so that, while the inanities and indecencies of Musical Comedy are sniggered at and applauded, the deepest permanent passions of men and women are tabooed, and the serious dramatist is bidden to keep his character well within the compass of that system of morality which is practiced among wax dolls.

III. The divorce of the English Drama from its sister Arts; its deposition from any assured place in the intellectual and artistic life of the nation.

IV. The absorption of the English Drama into popular amusement; the absence of any high standard whereby to judge acting or plays; the absence of all great traditions, the absence of all pride in the Drama as a fine and humane and dignified art.

V. The want of a training school for actors—the want of any means for giving promising novices a constant practice in varied rôles, that they may gradually acquire a sure grip of their art, and make the best of their natural gifts; and that the author may have a sufficient supply of competent actors to interpret his characters in such a way that his play may be seen to good advantage.

VI. The elevation of incompetent actors and actresses into false positions as stars, whereby, in the dearth of any general level of experienced and competent all-round acting,

the possessor of a pretty face or a fine physique is able to dominate the situation, and to rule what plays should be produced, and how they shall be cast and mounted. The general lack of all interest in the play, or in the author's study of life and character, apart from their being the vehicle for some star actor to put or keep himself in a leading position, with his actor brothers and sisters as his satellites.

VII. A widely spread dependence upon translations and adaptations of foreign plays, inasmuch as they can be bought at a cheap rate, and as owing to the absence of any general care or knowledge as to what a National Drama should be, they are just as likely to provide the actor with a personal and pecuniary success, while they also largely set him free from all obligations to that objectionable and interfering person, the author.

Now all these discouraging symptoms and conditions of our Modern Drama which I have glanced at are inextricably related to each other; many of them are, indeed, only different aspects of the same facts; they are woven all of a piece with each other, and with that Puritan horror of the theatre which I believe to be the cardinal reason that neither America nor England has to-day an art of the Drama at all worthy the dignity, the resources, and the self-respect of a great nation. Many of these discouraging symptoms and conditions are perhaps more widely prevalent and more pronounced in England than in America. But I hope you will not think I have given an ill-natured or exaggerated sketch of the present condition of the Anglo-American Drama. If I have wounded your susceptibilities, I have done it with the good intention of rendering you some small help in your noble design of building up a great national school of American Drama. And, as an Englishman, I must regretfully own that I see a great chance of your hav-

ing a National Theatre and a National Drama, while we are left fumbling about among the grotesque futilities of French adaptations, and the imbecilities of musical farce.

Now, if I have struck my finger on the place in pointing to the religious dread of the theatre, and the consequent abstention from it of the best and soundest elements of our nations—if I have traced our difficulties and shortcomings to their true source, it is clear that before we can hope for any signal advance in dramatic art we must win over a large body of public opinion to our views. In their attitude toward the Theatre and the Drama, we may, I think, make a rough division of the Anglo-American public into three classes. Both in England and in America we have large masses, who may be counted by millions, of mere amusement seekers, newly enfranchised from the prison house of Puritanism, eager to enjoy themselves at the theatre in the easiest way; without traditions, without any real judgment of plays or acting; mere children, with no care or thought beyond the delight of the moment in finding themselves in a wonder-house where impossibly heroic and self-sacrificing persons make love and do prodigious deeds, and marry and live happy ever afterward; or in a funny house where funny people do all sorts of funny things. These form a great bulk, I think, of American and English playgoers. Then we have a very large class of moderate, reasonable, respectable people, who go to the theatre occasionally, but with some feeling of discomfort at having done a frivolous if not wicked thing; who are not actively hostile to the Drama, perhaps, but who are quite indifferent to its higher development and to its elevation into a fine art. This class contains many refined, cultivated people,—that is, they seem to be cultivated and refined in all subjects except the Drama. It is a constant puzzle to me why men and women who are thoroughly educated and developed in every other respect

should suddenly drop to the mental range of children of five the moment they think and speak about the Drama.

Again we have a third class, a very large class, which contains some of the soundest and best elements of the Anglo-American race—very influential, very respectable, very much to be regarded, and consulted, and feared. And this large, influential, religious class is in more or less active hostility to the Theatre, and to the Drama, and to everything and everybody connected therewith. We may call these three classes, respectively, the amusement-seeking class; the moderate, reasonable, indifferent class; the hostile, religious class. This is the very roughest and loosest division, and, of course, all these classes blend and shade into each other without any rigid line of distinction.

I do not know how actively hostile to the Drama are the religious elements in American society. I am told that while the religious prejudice against the Theatre is dying away in the eastern seaboard States, it is still most potent and aggressive in the West. But a story that was told me before leaving England will, I think, convince you that this religious prejudice is still a terrible hindrance to the highest development of your Drama. There is nothing in which Americans can more legitimately take pride than in the magnificent public spirit shown by their wealthy citizens. Englishmen stand agape and envious at the large sums given by your millionaires to advance and endow all kinds of scientific, artistic, and social enterprises. I am told that a very large amount was designed by a wealthy American to found and endow a National American Theatre on a most lavish scale, but he was persuaded by a religious friend to hold his hand and shut his pocket because of the evil that a National Theatre might work in your midst.

Consider what mischief was done to the whole American community by the frustration of that most wise, most hu-

mane, most benevolent scheme. Consider how many hundreds of thousands of your fellow-citizens will in consequence waste their evenings in empty frivolity when they might have been drawn to Shakespeare and Goethe. Therefore, we must still count that the hostile, religious spirit is very active and potent on your side of the Atlantic as upon ours. It everywhere sets up a current of ill-will and ill-nature toward the Drama throughout the two entire nations; it everywhere stimulates opposition to the Theatre; it keeps alive prejudices that would otherwise have died down two hundred years ago, and it is, in my opinion, the one great obstacle to the rise and development of a serious, dignified, national art of the Drama. I fear there will always be a crew of unwholesome, religious fanatics in America and England who will be doomed at their birth to be hostile to the Drama. It is useless to argue with them. You cannot argue the jaundice out of a man, and advise him that it is foolish to have a sickly green complexion. He needs something far more drastic than advice and argument. We must leave the fanatics to rave against the Theatre and against all art and beauty.

But among this actively hostile religious class, and also among the moderate, reasonable, indifferent class, there must be thousands who, having been nurtured to regard the Theatre as frivolous and empty and evil, have adopted the ideas current around them, and have never taken the trouble to examine their stock prejudices against the Drama, and to inquire whether there is any ground for them. To this large body of American and English citizens, to the heads and leaders of all those religious sects in America and England who are now hostile to the Drama, and especially to that large allied class of influential, educated men in both countries, who, if not actively hostile, are supercilious and cold and indifferent and blind to the aims and possibilities

of this fine art—to all these citizens representing the best and soundest elements in the Anglo-American race we may make a strong and friendly appeal. I propose that we shall say to them:

"Brother Puritans, brother Pharisees, the dramatic instinct is ineradicable, inexhaustible; it is entwined with all the roots of our nature; you may watch its incessant activity in your own children; almost every moment of the day they are acting some little play; as we grow up and strengthen, this dramatic instinct grows up and strengthens in us; as our shadow, it clings to us; we cannot escape from it; we cannot help picturing back to ourselves some copy of this strange, eventful history of ours; this strange, earthly life of ours throws everywhere around us and within us reflections and *re*-reflections of itself; we act it over and over again in the chambers of imagery, and in dreams, and on the silent secret stage of our own soul. When some master dramatist takes these reflections and combines them and shapes them into a play for us, very nature itself is behind him, working through him for our welfare. So rigidly economical, so zealously frugal is she that what is at first a mere impulse to play, a mere impulse to masquerade and escape from life—this idle pastime she transforms and glorifies into a masterpiece of wisdom and beauty; it becomes our sweet and lovable guide in the great business and conduct of life.

"This is what she did for us in Shakespeare and Molière. Consider the utility of the Theatre, you practical Americans and Englishmen! You have noticed cats teaching their kittens to play at catching mice. But this is their great business and duty in after life. You have noticed puppies pretending to hunt and shake and kill game. But this is their great business and duty in after life. That is what all children and young things do. They play at their father's

business. So that their playtime is not wasted, but is, indeed, a wise, amusing way of preparing for life. So nature teaches us, her children, to play at life in the theatre, that we may carelessly and easily learn the great rules of conduct; that we may become insensibly instructed in the great art of living well, insensibly infected with a passion for whatsoever things are true and honest and just and pure and lovely and of good report.

"This, then, is the use of the theatre, that men may learn the great rules of life and conduct in the guise of a play, learn them, not formally, didactically, as they learn in school and in church, but pleasantly, insensibly, spontaneously, and oftentimes, believe me, with a more assured and lasting result in manners and conduct. Is not that a wise form of amusement? Ought not every good citizen to foster and encourage it? Then why, Brother Puritans, why, Brother Pharisees, are you found in such bitter opposition to it? If you are the veritable salt of the earth, as by your demeanor we seem to sniff, and as by this appeal we are willing to allow—if you are the veritable salt of the earth, where can you exhale your savor to better effect than in the theatres of your native land? Come among us and brace and strengthen us; incidentally we may sweeten and humanize you, and give you a larger outlook upon life.

"Look at the vast population of our great cities crowding more and more in our theatres, demanding there to be given some kind of representation of life, some form of play. You cannot quench that demand. During the next generation hundreds of theatres will be opened all over America and England. If you abstain from visiting these theatres, you will not close them. Millions of your countrymen, the vast masses, will still frequent them. The effect of your absence, and of your discountenance, will merely be to lower the moral and intellectual standard of the plays

that will then be given. Will you never learn the lesson of the English Restoration, that when the best and most serious classes of the nation detest and defame their theatre, it instantly justifies their abuse and becomes, indeed, a scandal and a source of corruption? Many of you already put Shakespeare next to the Bible as the guide and inspirer of our race. Why, then, do you despise his calling, and villify his disciples, and misunderstand his art? Do you not see that this amusement which you neglect and flout and decry is more than an amusement; is, indeed, at once the finest and the most popular of all the arts, with an immense influence on the daily lives of our fellow-citizens? Help us, then, to organize and endow this fine art in all the cities of our Anglo-American race, wherever our common tongue is spoken, from London to San Francisco. Help us to establish it in the esteem and affections of our fellow-countrymen, as the measure of our advance in humanity and civilization, and in that knowledge of ourselves which is the end and flower of all education!"

Some such appeal may, I think, be made to the more seriously-minded of our countrymen on both sides of the Atlantic. I have given it great prominence in this lecture because I feel that before we begin to build we need to clear the ground of the rank growths of prejudice and Puritan hatred which still choke the Drama. Both in England and America we seem to be waiting for some great national impulse, some word of command for a general forward movement toward a creative school of Drama. In spite of many discouragements and humiliations during the last ten or twelve years; in spite of the hatred of the religious world, the indifference and contempt of the educated and artistic classes, the debased frivolity of the multitude, the zealous envy and rage of those whose ignoble trade and daily bread it is to keep the Drama on a degraded level—

in spite of all these hindrances, I believe that word of command will be spoken, and that we shall march to it. But if there is to be any stability and permanence in the movement, it must be a national one. We must engage the sympathies and co-operation of all classes. We have many schisms and sects in religion; let us have none in the Drama.

I have taken much time, and, I fear, I have taxed your patience in thus clearing the ground. But having cleared the ground, we can begin to lay the corner stones. I have already told you what seem to me to be the corner stones of any school of Drama worthy to be called national in such countries as America and England. Perhaps I may here repeat them in the order of their importance. They are these:

I. The recognition of the Drama as the highest and most difficult form of Literature; the establishment of definite and continuous relations between the Drama and Literature.

II. The acknowledged right of the dramatist to deal with the serious problems of life, with the passions of men and women in the spirit of the broad, wise, sane, searching morality of the Bible and Shakespeare, his release from the hypocritical fiction that his fellow-creatures are large wax-dolls stuffed with the sawdust of sentimentality and impossible self-sacrifice. To sum up, the establishment of definite and continuous relations between the Drama and reality.

III. The severance of the Drama from popular entertainment; the recognition of it as a fine art which, though its lower ranges must always compound with mere popular entertainment, and be confused with it, is yet essentially something different from popular entertainment, transcends it, and in its higher ranges is in marked and eternal antagonism to popular entertainment. To sum up, the estab-

lishment of definite and continuous relations between the Drama and her sister Arts.

IV. The establishment of those relations between actor and author which shall best aid the development of the Drama; the recognition by the public that there is an art of the Drama as well as an art of Acting; the assignment of their due place and functions and opportunities to each; the breaking down, so far as may be possible, of the present deadening system of long runs; the provision of training schools for actors so that they may get constant practice and experience in varied rôles, so that the auxiliary arts of the Drama and the Theatre may keep pace and tune with each other; so that the art of Acting may not languish for lack of new plays, and that the art of the Drama may not languish from the lack of competent and serious actors. To sum up, the establishment of rigidly definite relations and well-marked boundaries between the art of the Drama and the art of Acting, to the benefit and advancement of both actor and author.

These seem to me to be the four corner stones upon which we must build, if we are ever to raise, in England and America, an art of the Drama with any real influence and import and dignity in Anglo-American civilization. But each of these four divisions of the Drama demands consideration and examination by itself.

Especially I should have liked to speak in this place upon the Modern Drama and Literature. But I felt that clearing of the ground was of primary importance. And now that I have given so much time to that troublesome operation, I fear you have been thinking that in Harvard at least the ground has been already cleared, and the first corner stone, the corner stone that is to bind together Literature and the Modern Drama, has been already laid by Professor Baker. Well, that is a most encouraging fact which I gladly recognize and acclaim.

After years of unsuccessful endeavor to get our English playgoers to read and examine in the study the plays that had delighted them on the stage, I one day received from Prof. Baker a letter to the effect that, as Professor of English Literature, he had given his Harvard students a course of modern English plays. Of all the many encouragements and rewards that I have received in England and America, I value most of all the recognition that was conveyed in that letter. It was a bold and original action on Prof. Baker's part. He must have met with considerable opposition, and perhaps some derision. I wonder what Oxford would say if it was suggested to her that modern English plays should form a part of her teaching. Oxford might rouse herself for a moment if some bold messenger dare knock at her gates on such an errand, and her reply would be: "Aeschylus I know, and Sophocles and Euripides I know, but who are ye?"

"Representatives of the modern Drama!"

"Modern Drama? The parvenus, Shakespeare and Molière, have pushed their way into my precincts. They represent the modern Drama here."

"No! No! Not the Drama of three centuries ago and of a vanished civilization, but the Drama of to-day, the modern Drama."

"There is no modern Drama," Oxford would sternly reply.

"Yes! Yes! Our plays run for hundreds of nights and take up a vast quantity of the winter leisure of our city millions, and help to fill the empty spaces in their skulls where their brains ought to be."

"Blank verse?"

"No—plain prose."

"Polished English prose?" Oxford would ask.

"No—unfortunately the English and American public

have abandoned for the present the habit of speaking in blank verse, or even in polished prose, and for the most part talk a slovenly, slangy shorthand, which, faithfully taken down, reads much like a sporting-man's telegram. If we were to put into the mouths of our characters a dignified, resounding prose, with nicely balanced cadences, we should be told we were stilted and unnatural. So we put into the mouths of our characters the actual phrases of the market place and the drawing-room, and we are scorned for not being men of letters and writing literature."

"But are you men of letters? Do you write Literature?" Oxford would solemnly demand.

"Well, scarcely at present," we could only stammer.

"Then, why should Oxford lose her hoary dignity and condescend to such as you?"

"Well, we trusted that Oxford as the center of English learning and education might aid us in rescuing the English Drama from chaos and imbecility; and, incidentally, in helping to set a standard of manners and conversation all over the English-speaking world."

"This smacks to me of elevating the masses, and never will I unbend my reverend energy to such revolting drudgery. The masses! The masses! Let them darken in labor and pain without my gates! I am the home of lost causes and decaying superstitions! What concern have I, Oxford, with the masses?"

"But it isn't merely the masses. You must have noticed how all classes of society regard our modern Drama—"

"Modern Drama!" Oxford would thunder. "All things modern I abhor. Has not my old age been vexed and shaken enough by modern Science? Modern Drama! Forsooth! There is no modern Drama! Away! You are raw! You are crude! You are vulgar! I suspect you are improper! And I allow none but classic impro-

prieties within my hallowed cloisters! Away, you plebeians! You mountebanks! You interlopers! Profane not my gray serenity with your uncouth diction. Avaunt and quit my sight! Your blood is warm! Your bones are full of the marrow of youth! Your eyes flash back the sunlight! You are alive! And I suffer none but the dead to enter here!"

Thus would Oxford answer, I fear, and let fall the massive portcullis of her learning, shutting us out forever, while she goes dreaming on among her dreaming spires.

But Harvard has welcomed us. Harvard has welcomed us, and the other American universities have also opened their doors. I have said that Prof. Baker did a notable and courageous thing in recognizing the modern English Drama at Harvard. I believe he also did a wise and far-seeing thing, a deed that may return in future days, like a happy harvestman bringing sheaves of ripe and benign consequences to American Art and Civilization.

When I was in America last autumn after an absence of twenty years, I could not help feeling myself in the presence of immense forces that are gradually shifting the foundations and changing the drift of Anglo-American civilization. I could not help feeling that the sceptre of material prosperity is slipping from our hands in your vigorous, remorseless grasp. I could not avoid the uneasy presentiment that in a few generations the centre and seat of whatever system of Anglo-American civilization may then be current will be irrevocably fixed on this side the Atlantic. That cannot be other than a saddening, chilling thought to an Englishman who loves his country. I cannot but think it will bring some sympathetic regret to many Americans. Yet, after all, your chief feeling must be one of pride and triumph in your young nation, and you will chant over us your Emerson's ringing notes:

The Lord is the peasant that was,
The peasant the Lord that shall be;
The Lord is hay, the peasant grass,
One dry, one the living tree.

But the Empire of Mammon sucks after it other empires; perhaps in our modern commercial world it will suck after it all other empires, all arts, all interests, all responsibilities, all leaderships. Yet we must still trust that in the days to come, as in days of old, it will not be the sceptre of material prosperity that will finally hold sway over the earth. Granted that, in a short time as reckoned by the life of nations, we shall have to hand over to you, with what grace we may, the sceptre of material prosperity, shall we not still hold that other magic wand, shadowy, invisible, but more compulsive than sceptres of gold and iron,—the sceptre of literary, intellectual, and artistic dominion? Or will you wrest that also from us? May we not rather hope to see both nations united in a great array to build one common monument of graceful, wise, beautiful, dignified human existence on both sides of the Atlantic? Your nation has what all young nations have, what England is losing, the power to be moved by ideas and that divine resilient quality of youth, the power to be stirred and frenzied by ideals.

If a guest whom you have honored so much, if your most fervent well-wisher may presume to whisper his most fervent wishes for a country to whom he is so deeply indebted, he would say: "As you vie with us in friendly games and contests of bodily strength, may you more resolutely vie with us for the mastership in art and in the ornament of life; build statelier homes, nobler cities, and more aspiring temples than we have built; let your lives be fuller of meaning and purpose than ours have lately been; have the wisdom richly to endow and unceasingly to foster

all the arts, and all that makes for majesty of life and character rather than for material prosperity and comfort. Especially foster and honor this supreme art of Shakespeare's, so much neglected and misunderstood in both countries; endow it in all your cities; build handsome, spacious theatres; train your actors; reward your dramatists, sparingly with fees, but lavishly with laurels, bid them dare to paint American life sanely, truthfully, searchingly, for you. Dare to see your life thus painted. Dare to let your Drama ridicule and reprove your follies, and vices, and deformities. Dare to let it mock and whip, as well as amuse you. Dare to let it be a faithful mirror. Make it one of your chief counselors. Set it on the summit of your national esteem, for it will draw upward all your national life and character; upward to higher and more worthy levels, to starry heights of wisdom and beauty and resolve and aspiration."

THE IDEA OF TRAGEDY[1]

BY WILLIAM L. COURTNEY

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THERE is a curious passage in one of Heine's prefaces in which he says that while writing his poems he seemed to hear the whirring of the wings of a bird above his head. He asked some of his brother poets in Berlin whether they had had a similar experience, but they only looked at each other with a strange expression and declared that nothing of the kind had occurred to them.[2]

The wings which Heine had heard, and the young Berlin poets had never heard, were the rush and whirr of new ideas. Only those who are conscious of this wing-winnowing are inspired by the thoughts of a newer era, and are awake when the dawn appears. To Euripides, at all events, who thought to some extent contemporary with the older poets, Æschylus and Sophocles, was a whole age after them in thought, there must have come the strange sounds which Heine heard; for no one more characteristically than he became the exponent of a period of revolution and change. It was a new heaven and a new earth, or, at all events, it was a new earth, which figured itself in his imagination, an earth in which rationalizing thought, a clear logical intelligence,

[1] This lecture was originally delivered at the Royal Institution, London, England, and is presented here to supplement the lectures originally prepared for the International Congress of Arts and Science.

[2] Heine's Preface to his New Poems.

and a determination not to accept unverified and unverifiable dogmas wrought havoc with the older scheme of things.

There was much in the contemporary state of Athens, so different from the Athens of the Persian wars, to explain and account for the transformation; but the phenomenon itself which was being exhibited in the Ionic capital can be sufficiently interpreted from the spiritual or intellectual side alone. No one can be sure whether Euripides was the friend of Anaxagoras or of Socrates; but the point is of little consequence, for there was a certain kinship between the two philosophers, and the dramatist may have caught the dominant notes of the newer era from either the one or the other. The older Olympians were being stormed by a young divinity called after no names of imperial or divine majesty, but by the simple term of "intelligence," "νοῦς" Whether the human analytic intelligence is applied to antique structures of religion, or superstition, or old-fashioned political theory, or hoary dogmas of morality, the result is always primarily destructive; and a chaotic period supervenes before reason can mould out of the scattered and inconsistent theories the fabric of a better and more intelligible world order.

Shall we look at it on the side of ethics? There comes the discovery that there are no abstract moral laws, true forever and in all places, but only recognized conventions which one country or city can adopt, and another community can reject. Shall we look at it from the side of political theory? We shall make strange discoveries as to the real seat of authority in a state, the meaning of justice, the rationale of civic law, the justification of state punishment. Shall we look at it from the side of religious belief? Here for the poet and the imaginative artist the acid seems to bite deeper still. Either the gods are good, and then the stories told about them are false, or else the stories are true,

and then the gods are no gods at all. How can Zeus and Apollo have carried out their dominion over the earth by means of actions reprobated by the better feeling of humanity? Cheating and stealing and adultery, these are the acts which the ancient legends impute to the gods, to say nothing of an absurd jealousy and a miserable system of favoritism. Such, speaking in general terms, was the character of the destructive work done by the Sophists and teachers of the new enlightenment.

The ordinary conception held in Athens about Socrates was that his influence was exerted on similar lines. He was brought up on a charge of corrupting the youth. It was an absolutely unjust charge, if we may trust Plato, who, indeed, gives us a glorified Socrates. Yet even Socrates' great pupil has to allow that dialectics, the business of argument and discussion and controversy, taught young men to wrangle like puppies and Aristotle said without hesitation that people ought to have come to years of discretion before they learned moral philosophy. Euripides, however, lived in the flood-tide of these ideas, and whether he learned from the lips of Anaxagoras the notion that intelligence was the supreme principle in the universe, or caught from Socrates the trick of argument and analysis of the current notions of the day, his dramas, ostensibly like some of the older ones, are yet inspired by a perfectly different spirit. The effect in his case is all the more interesting to us because there are many superficial and some real likenesses between the age of the Sophists in Greece and that spirit which has been called *fin de siecle* in our modern world.

Skepticism is, of course, the first result. Much learned controversy exists as to whether Euripides was really a skeptic; but there is no manner of doubt that his handling of the older myths and his treatment of the divinities of Greece were conceived in a skeptical vein. Listen to the

naïve way in which Ion, coming out of the temple in the early morning light, rebukes his patron god Apollo for the treatment he had meted out to his mother. "I must needs rebuke Phoebus," he says. "He betrays virgins and abandons them, and allows his own children to perish. Not so, Phoebus: since you have the power, try to be virtuous. The gods punish a man who conducts himself badly. Is it just that the authors of the laws imposed on mortals should themselves transgress them?" Listen in "Andromache" to the words of the messenger who has told us of the death of Neoptolemus: "The god who inspires oracles, who reveals to all men the rules of justice, see how he has treated the son of Achilles. Like a villain he has wreaked vengeance for an ancient quarrel. Where then is his wisdom?" But, indeed, I need not quote examples which are familiar to all those who have read the plays of Euripides. No one was more daring than he in making the characters rebuke the gods for their extraordinarily low ethical standard. One of the apparent exceptions is furnished by the "Bacchantes," in which Euripides seems to recommend the worship of Dionysus. But he was writing for a Macedonian Court, and the meaning of the "Bacchantes" is one of the most contested points among Euripidean commentators.

Skepticism is the half-sister of pessimism, and the thinker who has adopted the one glides almost insensibly into the other. Here we reach a point which is of peculiar importance to us in reference to the idea of tragedy, and I must be pardoned for dilating a little on this subject. It is obvious that tragedy itself is born of pessimism, and could scarcely be conceived as having any other origin. Unless a poet is keenly alive to the sufferings of humanity, unless he feels to the full the irony of mortals whose everyday dream is of happiness, and whose everyday experience is of disappointment and unhappiness, he would hardly adopt tragic themes

for the exercise of his muse. Everything, however, turns on the meaning that we attach to this word pessimism, and the particular form in which it becomes the inspirer of dramatic efforts. In a previous lecture, when speaking of the pessimism that was in Shakespeare, I attempted to distinguish between the pessimism which despaired of human happiness and the pessimism which despaired of human virtue. That is looking at the matter from the point of view of the moralist. Now we must occupy ourselves with the standpoint of the artist.

There are some forms of the philosophic theory of pessimism which appear to cut at the very root of the artistic impulse. If they ever produce fruit in the imaginative sphere, the fruitage is singularly bitter, stunted, abortive. Take, for instance, a scheme like that of Schopenhauer. Beginning with an assurance that there is a large preponderance of misery over happiness in this world, he explains that we are all the victims of a great, mysterious, blind, but all-powerful force, which he calls "the will to live." If you and I and all other men and women are alike miserable, the reason is that we are at once the creatures and playthings of a great impersonal, natural volition, driving us to live our dreary lives, to fear death, and cling to existence, whether we will or no. Intelligence which is given to the human race is the dreariest of mockeries, for it is powerless against this insatiable craving. All that intelligence can do is to throw light upon the turmoil, to make us comprehend the fatal conditions in which we are ensnared, and thus to make us more unhappy than we were before. Now observe the moral which Schopenhauer draws from his philosophical scheme. He tells us that we should deny the will to live, not so much by suicide, for that would be a willful act, and our object is to get rid of will—but by asceticism, self-restraint, resignation to passivity, such as was practiced and is now practiced in the East.

Now, if we suppose that any dramatic artist accepted Schopenhauer as his guide, philosopher and friend, he would have to believe that passivity was better than activity, and would be essaying the almost impossible task of painting by means of action a goal of inaction. The essence of drama is human activity; the very word signifies action; and the idea is absolutely eviscerated of all meaning by the assumption that a denial of the will to live is our real object. Schopenhauer's own notion of tragedy illustrates this. It is only at best a sort of alleviation or temporary consolation —part and parcel, therefore, of that lamentable gift of intelligence which shows how hideous is the chaos in which we live. "What gives to all tragedy, in whatever form it may appear, the peculiar tendency towards the sublime is the awakening of the knowledge that the world, life, can afford us no true pleasure, and consequently is not worthy of our attachment. In this consists the tragic spirit; it therefore leads to resignation."[1]

But the artist must believe in his work as a free and joyous form of activity, not assuredly as a mere anæsthetic, an anodyne, a mode of sending to sleep a ceaseless grumble of indignation and despair.

Such pessimism as this is, I say, for the most part fruitless, or, if it bear fruit, such fruit is atrophied, abortive, bitter, like dead sea-apples in the mouth. It is difficult, perhaps, to suggest a work of art which is conceived in this spirit, and is the direct fruit of Schopenhauer's pessimism. But perhaps Mr. Hardy's *Jude the Obscure* comes the nearest to it, a work which depresses human vitality, and therefore, as I take it, sins against humanity. Better examples can perhaps be found in some of Zola's novels—*L'Assomoir, La Terre,* and others.

Nevertheless, the conditions of life may be regarded as

[1] Schopenhauer's *"World as Will and Idea."* Book III, cap. 37.

miserable, and yet human actions stand on a higher plane than before. On a dark background of gloom the higher qualities of the human being—his love, devotion, passion, self-denial, recklessness—may stand out in almost radiant colors. Let us grant with the pessimist that man, as he exists in the midst of a nature that is alien to him, and under social conditions which stunt or retard his growth, is not likely to secure much happiness. Nature, as we know, is harsh and cruel, and her laws are those which are terrible for the individual, though helpful, it may be, for the world's progress—the laws of struggle for existence, the survival of the fittest, and development by means of unlimited competition. Or if we take it from another side of science—the science of biology—there is reason to suppose that the sins of the fathers are visited on the children, and that many men and women begin their careers crippled and maimed by a hereditary taint. Or once more, the social order is found to be oppressive, framed as it is for the convenience of the majority—the incarnation of triumphant commonplace, the victory of the conventionally useful rather than the ideally good, the despotism of a majority which, as Dr. Stockmann declares in Ibsen's *Enemy of the People,* is at least quite as often wrong as right.

Such things may well breed a sort of pessimism, may produce for the thinker and philosophic student a mood of nervelessness and gloom. But the artist who approaches these subjects not as a thinker or as a student, but as an observer of the flash and play of human life, sees that on this background of darkness he can paint his human beings with all their rich vitality and spontaneousness of effort, transfigured and ennobled by contrast. And he has this justification to begin with—that all the nobler and higher activities of man, whether in founding States, creating rules of morality, or even building hospitals, are done in the teeth

of nature, and constitute a direct challenge to the dull mechanical cruelty of her laws. But the sovereign vindication for the artist is the exceeding beauty of all human vitalities, whether they are effective or ineffective, whether they succeed or fail.

It is life as such that the artist loves, strong, exuberant, magnificent life, defying laws of time and space, and conquering the impossible—circumscribed, indeed, if we look at its scientific conditions, but absolutely free and untrammeled in its spiritual essence. If an artist who feels the intoxication of life writes tragedies, they do not in reality depress us, because instead of making the pulse flag and beat slower, they stir us, as it were, with a trumpet-call, they cause the blood to flow more eagerly through our veins. Did any one ever feel his sense of vitality lowered by either reading or seeing on the stage the ruin of Othello or the tragedy of Lear? It is more difficult to find contemporary examples, but one can feel much the same thing with regard to many even of the modern novelists whose books are often classed as pessimistic. Take, for instance, the two books of that strong, original writer, who calls herself "Zack"—*On Trial* and *Life is Life*. They are pessimistic enough in all conscience, if we mean by the word that the authoress is keenly conscious of the sorrow of things. But the artist has known how to enhance the dignity of human effort, even when she proclaims it to be hopeless. We do grievous wrong to works of art if we dismiss them because they seem to preach a gloomy moral. There is a gloom which is paralyzing; there is another gloom which a man or woman of strong creative personality can turn into a very mainspring of pulsing action and life.[1]

If, therefore, we class Euripides as a pessimist, we must

[1] See an essay by Mr. William Archer (contributed to the *Fortnightly Review*), entitled "Tragedy and Pessimism."

be careful to define what kind of pessimism he represents. He is an apt parallel to the moderns because he comes after the first primitive artistic impulse has waned; he lives in an age when for the majority the native hue of resolution had been sicklied o'er with the pale cast of thought. But on a canvas of vacillation and doubt, with a background of skepticism as to the nature and existence of the gods and a resolute acknowledgment that life is in many respects evil, he paints, with all the more touching and picturesque pathos, suffering, struggling, doomed, passionate, but always vigorous humanity.

It is the pathos of things, indeed, the *lacrimae rerum* which so occupy Euripides that he becomes almost romantic in the treatment of his themes. It is this sense of pathos and pity which made Aristotle call him the most tragic of the poets, and was in the mind doubtless of Mrs. Browning when she wrote of "Euripides the human with his droppings of warm tears." Men and women in the Euripidean drama are always alive: they sin passionately, they transgress all moral and divine laws; they destroy one another with a fierce ferocity, they make glorious failures—but they are vital. And just because the play of life was so infinitely interesting to Euripides, whether it was Anaxagoras who told him this lesson or Socrates or his own artistic genius, he can put into clear light quite as many virtues as the vices of which he is so prodigal. Many critics have called him misogynist, and certainly he says very hard things of the female sex. As a matter of fact, in the tragi-comedy of existence, he realizes far more clearly than his predecessors the extraordinary value from an artistic standpoint of women-characters. He knows how they can embroil and embellish human things, how they can at once disturb and improve, ruin and save. By the side, therefore, of his splendidly villainous women like Phaedra and Medea and

Stheneboea, women who break through every natural impulse with undaunted recklessness, he will give you women who are patterns of high moral duty, women filled through and through with the idea of self-sacrifice, willing victims, like Polyxena and the beautiful Iphigenia—not, as in the older dramatist, killed by her father, but going voluntarily to the altar for the sake of the Trojan expedition. So, too, there is no higher example of conjugal love than that of Alcestis, who died for her unworthy lord.

Like Virgil after him, Euripides sees also the artistic value between man and maid. This was a complete innovation in tragedy. Plato thought that love itself was not a worthy theme in drama. Aristophanes derides it. But the poet's contemporaries who were themselves perhaps learning a softer mood of romance, as the great patriotic impulses of the Persian wars were dying away, appreciated the novelty as though it were indeed a revelation. Take the young Haemon with his love of Antigone, cheerfully dying for her sake, or take the moving treatment of "Perseus and Andromeda," which seems to have captivated Athenian audiences though it only exists for us in fragments. Andromeda, as Professor Lewis Campbell remarks in his interesting book on Greek tragedy, says the very words to her deliverer which Miranda in "The Tempest," says to Ferdinand: "Sir, take me with you, whether as your servant, or wife, or handmaid," anticipates Miranda's "To be your fellow you may deny me, but I will be your servant, whether you will or no." Euripides may or may not have been a misogynist, but at all events he was one of the "Feminists," a protagonist in that movement which so profoundly influences the Norwegian dramatist Ibsen.

In what I have said I have already anticipated some of the conditions of a modern age. In a remarkable speech to a club of workingmen at Drontheim in 1885, Ibsen declared

that "the Revolution now preparing in Europe is chiefly concerned with the future of the Workers and the Women. In this I place all my hopes and expectations, and for this I will work all my life." Here are certainly two points which will mark the lifework of an advanced thinker in contemporary times. The rise of what is known as the Feminist Movement, the echoes of which are even heard in France, as proved by such remarkable novels as *Femmes Nouvelles,* by the Brothers Margueritte, and *Une Nouvelle Douleur,* by Jules Bois, must naturally alter the point of view of any dramatist who is concerned with the social aspects of the era.[1] Themes therefore, which treat of the contrast between the two sexes, and of woman's economic moral and intellectual emancipation, come to the forefront, and indeed could scarcely be expected to be absent in any author who is inspired by the newer lights.

So, too, with regard to the other great question, which in its general tendency is called socialism. The various classes of society, their differences of station, their life struggle, the contrast between rich and poor, the great gulf fixed between social influence and social impotence, these will not leave themselves without evidence in the works of a modern thinker. Add to these a characteristic mark of the latter part of the 19th century—the solution of all questions on scientific grounds and by means of scientific formulæ—and we have the main ingredients of that environment in the midst of which a contemporary dramatist has to work. Materialism—a practical materialism which makes wealth one of the objects of men's lives, and a theoretical materialism which makes the doctor the great hero of modern life, because all diseases, spiritual or mental, are in the last resort declared to be physical; a social order in which woman

[1] The note is, of course, different in England and France. In England it is the practical inconvenience of the revolting female; in France it is the voluble indignation of the baffled male.

is acclaimed as the arbiter of her own destiny—these are the general aspects, the contemporary features which art has to work with, and, if possible, mould to her own purpose.

There is, however, another point which, for our immediate object, is more important still. We are not dealing with a young civilization such as was to be found in Greece in the sixth century B.C., and in Italy in the early Renaissance. We are dealing with a society which has lost, to a large extent, its faith in ideals, which has become skeptical of its own efforts, more than a little weary of the higher aims, more and more content to relapse on the lower levels of life and thought. To an age of this kind, to a civilization which can be described in these terms, how will the general idea of tragedy be altered? It depended, you will remember, on a certain equipoise between an external compelling fate and an internal power of initiative and resistance. The one was the element of necessity, the impersonal order of the universe; the other was the element of freedom, the personal fount and source of action.

Now, when Shakespeare was attracted by this problem—the sphere allowed to human volition in the midst of a great overpowering environment—he slowly worked towards a conclusion which was consistent with his own energy of temperament and with the general characteristics of his age, that what we mean by Destiny and Fate is nothing more nor less than a man's character. Man has not to look outside for the impulses which govern him, but the tyrants which rule his birth are found within the four walls of his own personality. Such a doctrine might suit the strong youthful times of art and of a nation's vigor, because, under such conditions, the value of human efforts is recognized as the one great thing in the universe; but when the times have grown older, when there has appeared a certain lassitude in

art and in national existence, such a doctrine is too hard to be borne. It is so much easier for those who are already fatigued and wearied with much experience and much knowledge of the fallaciousness and failure of human effort to say that destiny comes from the outside, and is an irresistible force overbearing human wills.

In Maeterlinck, for instance, you find the conclusion that man is the plaything, the sport of Destiny. At all events this is true of Maeterlinck's earlier dramas, where the human figure is so faintly drawn that the notion of spontaneity or freedom is absurd and impossible. "Pelleas and Melisande" were both the victims of fate, which they could not control; so, too, were Aglavaine and Selysette; so, too, was the unlucky Princess Maleine. If you reduce human vitality to a thin, almost incorporeal vapor, if, instead of human beings that have length, breadth and thickness, you have frescoes on a wall, it is absurd to ask if things like these can alter their fates, or recognize that the supreme fate lies in their character. They will be driven hither and thither as leaves in a wind, puppets dangled on wires over which they have no control, dolls which the dramatist takes out, dresses up, and when they have finished their task, puts into the box again. What Maeterlinck will do hereafter is another matter. He has written a fine book on *Destiny and Character,* and for aught we know may be devising in his mind quite other characters and dramas from those with which we are at present conversant.[1]

It is more than commonly difficult to arrive at any just estimate of the position of Ibsen as a dramatist. It would not be true to say of him, as I venture to say about Maeterlinck, that he depresses the sense of human vitality. His thought, if not always quite clear, is always vigorous; he

[1] In what I have said I am only dealing with the dramatic qualities of Maeterlinck. The poetic qualities, the haunting and suggestive beauty of his scenes and some of his lines, are quite another matter.

has a singular grasp of many of the insistent problems that vex the modern world, and for reasons that are connected with his unique personality, he wields a curious power of fascination in many ways disturbing to the judgment. There is much of the sorcerer in him, so that however much one may dislike his themes, he holds us, like the Ancient Mariner, with his glittering eye, compelling us to read what he has to say to the last page. Moreover, he is so unconventional that he gives a vivid impression of originality, not always, I think, quite deserved. Many of his social themes, for instance, appear in French dramatists, who raise, though in a different form, the precise questions which Ibsen raises. But no one could deny him the name of a dramatist. He is a master of theatrical technique, in the presentment of his themes, and in the evolution of such plot as he allows himself. Both his characters and the phrases which from to time he puts into their mouth have a distinct power over our imagination, so that they become unforgettable. Indeed, I might go further. They obsess the mind like a nightmare that we should like to shake off, but cannot.

If all this means anything, it means that Ibsen is a real dramatist. Think, for instance, in one of the least satisfactory of his dramas, "Little Eyolf," how admirably the first act is arranged, how clearly it puts the issues before us, how instantly we understand the situation of the father and mother now that their boy is lost. Sometimes, as in this case, Ibsen begins with a catastrophe, and works out its consequences; sometimes, as in "John Gabriel Borkman," the catastrophe has happened before the curtain goes up. In each case we are put as close as possible to the critical moment, and the concentration of interest which is thereby gained is found to be of no little dramatic value. The Norwegian writer prefers to work analytically rather

than synthetically. He does not show how the tragedy grows, but, breaking it into its component parts, he traces the effects of the tragedy on his characters.

Nevertheless there remains one constant quality for which it is not easy to find a word. It is a quality of grimness, of ruggedness, of irritability, as though life and the world had got on his nerves and filled him with spleen. His dramas are never written in a serene artistic temper, but too often represent the unfathomable indignation of the idealist who looks from Dan to Beersheba and finds the whole country barren. It is not an uncommon effect of analysis that it leaves few of the fair structures of life standing. The analytic mind, whether in the man of science or in a disappointed and thwarted poet like Ibsen, by resolving a thing into its component parts, loses the sense of its general value, mars its beauty, destroys its serviceableness in the order of the universe. We know, for instance, how victorious analysis, in the sphere of practical and moral science, has done its best to resolve the notion of duty into convenience or pleasure or personal utility, and the idea of conscience into an inherited fear of the spirits of dead ancestors.

Something of the same kind must happen when an isolated thinker like Ibsen probes the ordinary conventions of social life and finds them hollow, taps at all the shutters and discovers that what is behind them is valueless, throws open the closet-doors and reveals the skeletons, tears the veil from human affections, and displays their meanness and littleness. Mankind must appear very despicable to a man who makes Peer Gynt the hero of a drama, paints the conventional husband under the form of a self-satisfied idiot like Helmer, and has an especial fondness for introducing the Norwegian emancipated young woman as the destroyer of connubial felicity. The human animal is either

a knave or a fool, and generally contemptible; nor does Ibsen even spare men like Master-builder Solness, or wounded Napoleons like Borkman, albeit that they are supposed to enlist our sympathies.

It is not an age for the male being, Ibsen would seem to tell us; on the other hand, it is emphatically an age for the female being. In this, of course, the dramatist is true to the ideas of his century, the latter half of which has been overridden by the claim of women to fashion their own world as they will, to succeed or fail, self-taught and independent, and to have no kind or manner of reverence for hoary social institutions. In Ibsen the woman is often treated with a tenderness which stands out in vivid contrast with his natural moral suspiciousness. Take, for instance, these lines, from an early play, "The Pretenders." The King says, "Every fair memory from those days have I wasted or let slip;" and Ingeborg, the woman, replies, "It is a man's right," or in the later edition, "It is your right to forget." "And, meantime," the male continues, "you, Ingeborg, loving, faithful woman, have sat there in the north, guarding and treasuring your memories in ice-cold loneliness." To which the woman simply answers, "It was my happiness to remember." As she leaves the stage she utters the beautiful words, "To love, to sacrifice all, and be forgotten; that is woman's saga."

Although this little dialogue is conceived in a tender and gracious spirit, it reminds one of those keen heart thrusts which pass between husband and wife in "A Doll's House." Helmer: "No man sacrifices his honor even for one he loves." Nora: "Millions of women have done so." We cannot easily forget the piteous wife of the Master-Builder who has kept all her old doll's clothes in a drawer; nor, better still, the figure of Agnes in "Brand." Agnes, poring over her little dead boy's suits, or placing her candle in the

window so that its light may fall across the snow on his grave, and give the little one a gleam of Christmas comfort, is drawn with some of the most exquisite touches, full of a soft and radiant sweetness in the midst of an almost habitual gloom. Nor can the man be said to have failed in understanding the feminine nature who has drawn such remarkable figures as Rebekka in "Rosmersholm" and Hedda Gabler in the play called after her name. You will find, I think, that many actresses have liked to act in Ibsen's plays, because the heroine appeals to them. Even Eleanora Duse has acted in "A Doll's House," albeit that her masterful vitality and the richness of her artistic nature made the little butterfly Nora, who suddenly wants to discover "whether society is right or she is," a more paradoxical character than before.

There is, however, in Ibsen, despite the fact that he is above all a thinker and a student, a certain incoherence of ideas which has sometimes a very baffling and confusing effect. Partly this no doubt is due to the fact that some of his earlier dramas were written under the inspiration of a Danish thinker, Soren Kirkegaard, an influence which evaporated when he executed his later studies. The tragedy of "Brand" and the work "Love's Comedy," which, thanks to Professor Herford, those of us who do not know Norwegian can now peruse for ourselves, are especially overshadowed by the thoughts of Kirkegaard. I say "overshadowed," because of all the thinkers who have made life difficult for us mortals this Danish philosopher is the most paradoxical. He is an idealist, who seems to have begun in the school of Kant, but his paradoxes are even more remarkable than those famous antinomies of reason and experience which made the German philosopher of Königsberg so full of hard sayings even for a Teutonic audience. In "Brand," for instance, the Kirkeguardian

god, whom the hero worships, is a deity who demands the most appalling sacrifices of all human ties and associations before he can be approached and understood, or subsequently revealed as a *deus caritatis*. Brand lets his mother go to hell, is the cause of the death of his own child, and finally sacrifices his wife—all in the pursuit of an ideal righteousness, a peculiar state of will, wholly remote from our actual life in some impossible transcendental sphere. How a god who required such sacrifices as these, who demanded so urgently and cruelly that all human feelings should be eradicated, can be afterwards proclaimed as the god of love, when his sovereign power had emptied such a word of all meaning, is impossible to understand.

Observe, too, a curious cynicism with which this pursuit of paradoxical idealism manifests itself in "Love's Comedy." In a boarding house are collected a number of young men and maidens, mostly ordinary and conventional, under the care of a lady who boasts herself to be one of the most successful match-makers of her time. But there is one thinker, Falk, and one true woman, Swanhild, who stand out above the common herd. They are the predestined lovers, because each has understood in the other where the need of true companionship lay, and because they had real spiritual affinities. Nevertheless, when this love is mutually confessed, they decide to separate, and Swanhild elects to marry a practical elderly merchant, Guldstad. Why? Because love is such a rare thing, it has such a delicate essence of its own, that when caught in the nets of matrimony it is only too apt to disappear. It is better to have loved and to remember, than to love and get married. Love which prompts the need of union is apparently the very thing which dies when the union is consummated.

Of course such a doctrine has an obvious common-sense truth of its own, but for the idealist it is based on a con-

fusion between the material form and the spiritual essence of love. Passion, being a fugitive and inconsistent thing, may and will certainly die, but the butterfly will often soar with all the brighter colors because the chrysalis shape has been thrown off. Observe, however, the sort of moral which the mocking spirit of Ibsen seems to draw from his play. Conventional marriages—*marriages de convenance*—can safely be recommended. No injury can be done by them, no mortal wound inflicted on love. And yet this is the man who afterwards will storm and rail against conventional marriages, because they destroy human individuality. Cynically to recommend an union which is afterwards found destructive to the human soul betrays what I venture to call incoherence of ideas. Nor is this the only form in which this incoherence is exhibited.

There is a tendency in many of the later plays to employ high-sounding phrases apparently of deep symbolical value, but which on examination seem to contain but little or nothing. We hear of "the great law of Change," a pretentious phrase to signify that human character is more or less fickle; or "the great law of Retribution," with which, indeed, every dramatist should deal without investing it with capital letters. Nor shall I hesitate to say that over and over again the word "Liberty" is used as if it could only mean irresponsibility. Sometimes the freedom for which Ibsen is constantly pining is hardly to be distinguished from license.

I touch with hesitation on another point which I believe forms a somewhat envenomed subject of debate between the older and the newer schools of criticism. I refer to a certain poverty of *mise en scene,* a designed squalor in the range and meaning of the plot, a provincialism, as it were, in the intrigue and management of Ibsen's dramas. You will remember that Matthew Arnold believed that the only

true literature was the literature of the centre, something that belonged to the main line of literary development on the ground of its style, its manner of treatment, its arrangement of data. Ibsen's literature could never be described as that of the centre. Perhaps the time has come when literature ought no longer to belong to the centre, but to the circumference, and there are many signs among our contemporary writers that they have definitely accepted this view of the circumference as the chief object of their interest. Meanwhile, from the point of view of tragedy, which Aristotle said is to deal with great things, and which has been depicted in poetry as tragedy "with purple pall," as though some regal splendor should belong to those whose ruin is depicted before our eyes, the tragic drama that you find in Ibsen is singularly mean, commonplace, parochial—as if Apollo, who once entered the house of Admetus, was now told to take up his habitation in a back parlor in South Hampstead. There may be tragedies in South Hampstead, although experience does not consistently testify to the fact; but, at all events from the historic and traditional standpoint, tragedy is more likely to concern itself with Glamys Castle, Melrose Abbey, Carisbrooke, or even with Carlton House Terrace.

Behind some of the grandiose tragedies of Shakespeare, there is the suggestion of a world-catastrophe as if palsied King Lear shaking his menacing finger at the waterspouts was the crazy prophet of a cosmic ruin. Such an atmosphere never surrounds the Ibsen drama. For instance, "The Enemy of the People" is a play on much the same subject as "Prometheus Vinctus." In both there is a picture of the one man, never so strong as when he is all alone waging, on the ground of his superior knowledge and insight, war against the forces of ignorance, and blind, unreasoning force. Dr. Stockmann is a Prometheus, a Pro-

metheus who has his front windows broken, instead of having his liver eaten by Zeus' eagle. In the one case the scene is laid in the Caucasus with winged messengers of Heaven, with patient or impatient victims of divine injustice, thronging the stage; in the other case the scene is laid in the editorial room of a provincial newspaper, with disputes between the business manager and a contributor, and a general apparatus of printer's devils to take the place of Io and the daughters of Oceanus. There is something in the "grand manner" after all!

The same result is arrived at if we study most of the social dramas, by which Ibsen has made himself notorious. There is that triumphant masterpiece of squalid obscurity, with all its incisive analysis of a petty woman's soul, which is called "Hedda Gabler," or there is that dreary record of provincial meanness and pessimism enshrined in the exceedingly clever play "The Wild Duck." Neither the heroines nor the heroes are really great. Perhaps Ibsen has taken peculiar pains to destroy the titles of his heroes and heroines to greatness. Was, for instance, Master-Builder Solness an architect of commanding rank? Was John Gabriel Borkman a real Napoleon of finance? In both instances you have a peculiarly poignant picture of success followed by failure; but are the characters typical enough to make us feel that they are decisive examples of masterful skill or masterful rapacity? Solness is almost a symbolical figure, and the symbolic character tends to failure as an ordinary human being. Just as a mere phase of individual idiosyncrasy will not necessarily make a personage dramatic, so, too, will character in a tragedy fail to bring home to us the desolation of failure, unless he be in a real sense not symbolic but typical.[1]

[1] It is necessary to distinguish between a symbolic figure and a typical figure. A symbolic figure is an abstraction; a typical figure may be full of the ripe juices of humanity.

What, in fact, is Ibsen's idea of tragedy? As far as I can see, it is the failure on the part of a given individual to achieve his mission. In some dim way we realize that the broken-down heroes or heroines of Ibsen have had some task which they ought to have been able to perform, and some object of life which, under happier circumstances, they might have achieved, and their disappointment and disgust make the tragedy. This, of course, might be the description of every tragedy in the world's history. To know that one has a life vocation, to sin against it, and consequently to acknowledge oneself a failure, is of the very essence of the tragic idea. Nevertheless, if we are thinking of the impression upon ourselves, the character of the personages and the circumstances which are too strong for them have both to be considered.

Well, the indubitably great thing about Ibsen's characters, perhaps the only great thing about them, is their vanity; while the circumstances against which they have to struggle are, for the most part, relative to the circumscribed conditions of life in a young, crude, immature civilization in Norway. We know that when Ibsen had produced his extraordinarily impressive play of "Ghosts," and found that instead of sympathy he had won derision, he shook the dust off his feet against his native country and lived abroad. He realized that he was too advanced in thought and feeling for his Norwegian home. He is always full of the idea that the cramping circumstances of life in Norway are fatal to individuality, to human liberty. But he is a real revolutionary in this respect, that he does not care for liberty as a possession, but only as a pursuit. If heaven were to offer him freedom in a socialistic community on the one hand, and a vehement conflict on behalf of liberty in an old aristocratic and oligarchic state on the other hand, he would unhesitatingly choose the latter. For him it is the conflict which is sweet, not the victory.

Nor is he a pessimist in the proper sense of the term. He does not despair of human happiness under all circumstances, he only despairs of it under special and limited conditions. So much of the early idealism belongs to the disappointed and bitter poet that he thinks happiness well worth striving for. He will put all social institutions into the melting-pot, and wage ceaseless war against the established, the conventional, and the decorous, because the individual human being has a right to struggle ceaselessly for happiness. A later Ibsen play, "When We Dead Awaken," leads to much the same conclusions.

I have left myself but small space in which to deal with the contemporary movements of the drama. For many reasons it is better that I should pass over such points as still remain with only a brief notice. There is something invidious, perhaps almost distasteful, in the criticism of one who has no very large knowledge of the English theatre, and yet ventures to lay down dogmas in an authoritative way on artists who know their business a great deal better than he can know it. One or two general remarks, however, may be hazarded. In the present age there is no particular liking or room for tragedy. The world is apt to shut its eyes to the deeper aspects of existence, because any attempt to pierce below the surface is held to involve unpleasantness.

Comedy may or may not be a great success, but at all events it is far more likely to win its triumphs in an epicurean age than its elder sister, tragedy. People go to the theatre in order to be amused and to laugh; they hardly care to be made to feel. Some of the most earnest work of contemporary authors falls flat because it is held to be out of tune with fashionable surroundings of leisure and wealth, and artists themselves acquire a willful petulance and an accent of revolt owing to this atmosphere of care-

lessness or apathy. There is, too, that phenomenon, the literary drama, which has a paralyzing effect,—the drama, never intended to be acted, which under present circumstances comes to be recognized as the only form of dramatic writing that the leaders of the literary world care to essay.

Many of Browning's dramas belong to this class, all of Swinburne's and, according to some critics, a good many of Tennyson's. Nevertheless, there are some signs of a return to serious dramatic writing. There is the work of Mr. Laurence Irving and of Mr. Esmond, by no means devoid of promise. Quite recently we have been reading Mr. Stephen Phillip's "Paolo and Francesca," in which the beautiful legend of Dante has received a worthy setting of literary beauty; and Mrs. Craigie's "Osborn and Ursyne," vigorous, poetical, and rife with sincere emotion.

But, after all, the great reason for optimism with regard to the future is the fact that Mr. Pinero has given us in our modern age a play which is a masterpiece, "The Second Mrs. Tanqueray." Hereafter we shall know better, I think, than we do now how great an achievement Mr. Pinero's "The Second Mrs. Tanqueray" really is, how true a tragedy in form, management and style. We stand too close to it at present to see its true proportions, and the real issue disappears because it is classed not only among other plays of his, but superficially described as a study after the model of Ibsen. In form it is much more like a play of the school of Dumas the younger, although Dumas did not often write anything half so good. The character of Paula Tanqueray is one of the most triumphant creations which has ever been composed for the stage, in the fearlessness and truth of its portraiture and the artistic cunning of its presentment.

Dumas wrote "La Dame aux Camélias" when he was a young man. Mr. Pinero wrote "The Second Mrs. Tanqueray" in the maturity of his powers. While the one

gives a theatrical glorification of the courtesan, the other dares to draw her as she really is, in all the pathetically good instincts, and also the littleness and bitterness of her artificially developed soul. The style is in every sense worthy of the theme; indeed, here and there are classical passages, classical in their restraint, sobriety, and clear-cut form. Listen to the following, when Aubrey and his wife are sitting amid the hopeless ruin of their fortunes, discussing the probability or possibility of beginning again. The sentences ring with suppressed emotion, but the logical situation is exposed with a master's hand.

Aubrey. We'll make our calculations solely for the future, talk about the future, think about the future.

Paula. I believe the future is only the past again, entered through another gate.

Aubrey. That's an awful belief.

Paula. To-night proves it. You must see now that, do what we will, go where we will, you'll continually be reminded of—what I was. I see it.

Aubrey. You're frightened to-night; meeting this man has frightened you. But that sort of thing isn't likely to recur. The world isn't quite so small as all that.

Paula. Isn't it? The only great distances it contains are those we carry within ourselves—the distances that separate husbands and wives, for instance. And so it'll be with us. You'll do your best—oh, I know that—you're a good fellow. But circumstances will be too strong for you in the end, mark my words.

Aubrey. Paula!

Paula. Of course I'm pretty now. I'm pretty still—and a pretty woman, whatever else she may be, is always—well, endurable. But even now I notice that the lines of my face are getting deeper; so are the hollows about my eyes. Yes, my face is covered with little shadows that usen't to be there. Oh, I know I'm "going off." I hate paint and dye and those messes, but by-and-bye I shall drift the way of the others; I shan't be able to help myself. And then, some day—perhaps very suddenly, under a queer fantastic light at night or in the glare of the morning—that horrid, irresistible truth that physical repulsion forces on men and women will come to you, and you'll sicken at me.

Aubrey. I!

Paula. You'll see me then at last with other people's eyes, you'll see me just as your daughter does now, as all the wholesome folks see women like me. And I shall have no weapon to fight with—not one serviceable little bit of prettiness left me to defend myself with. A worn-out creature, broken up, very likely some time before I ought to be—my hair bright, my eyes dull, my body too thin or too stout, my cheeks raddled and ruddled—a ghost, a wreck, a caricature, a candle that sputters; call such an end what you like! Oh, Aubrey, what shall I be able to say to you then? And this is the future you talk about! I know it. I know it. (*He is still sitting staring forward, she rocks herself to and fro as if in pain.*) Oh, Aubrey! Oh! Oh!

Aubrey. Paula! (*Trying to comfort her.*)

Paula. Oh, and I wanted so much to sleep to-night! [1]

And the future? Of that, too, I perhaps may venture to say a word. The future of the drama depends more upon the temper of the people than upon anything else. For years past there has been a period of increasing prosperity, in which notions of ease and comfort and security have forced into the background all graver questions as inconvenient and irksome. How can the artist thrive when the standard of living is fixed by the men who run theatres for various motives: because it is not a bad form of investment, because the patronage of the drama is fashionable, but mainly because they want to be amused?

It is under such circumstances that English comedy becomes farce, or else a so-called musical play; while those who might appreciate tragedy, if they saw it, have to content themselves with vulgar and extravagant melodrama. But when the people alter, these things will, too, be different, and it is possible that even before our eyes the temper of the nation is transforming itself. Tragedy born of the people is at its best and fullest when it is contemporaneous with a great outburst of national life. Are we not living at present under a wave of indignant emotion, which is sweeping away class distinctions, destroying the false notion

[1] Mr. Pinero's "The Second Mrs. Tanqueray," Act IV.

that wealth is a form of nobility, bringing down the rough estimate of things to the bare human level, the qualities which make a virile and efficient man? Never in history has a nation awakened to the consciousness of its real sources of greatness without finding expression for its heightened feeling in art. That, I take it, is the hope, as eventually it will be the glory, of the twentieth century.

THE PLAYS OF HENRIK IBSEN.[1]

BY PHILIP H. WICKSTEED

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"BRAND" and "Peer Gynt" were fierce invectives against Norway, but they were welcomed with boundless enthusiasm by the very people they lashed.

It may be doubted whether such a phenomenon has ever been paralleled. Dramas filled with scathing satire and denunciation of the Norwegians have become as it were the Norwegian national epics. They have given Norway an exalted sense of national existence and national significance. They have been read by high and low, are known almost by heart by hundreds of Norwegians, and have enriched the thought, the proverbial wisdom, the imagination, and the language of Norway. To the wanderer over fell and fiord, they are ever present; their magic lines so blending with the scenery they describe, that he *sees* them in the snow-field and ice tarn; and the author of "Peer Gynt" and "Brand" is forgotten and lost—absorbed into the invisible and impersonal genius of the place which has become articulate through his words.

But Ibsen's direct polemic against his people was not yet completed. "Brand" and "Peer Gynt" were followed by "The Youthful League" (1869), a satire on the political

[1] Lecture originally delivered at Chelsea, England, and presented here to supplement the lectures originally prepared for the International Congress of Arts and Science.

parties and the political motives of Norway. This brilliant play is naturally one that ill bears transplanting, but English readers are in a position to form their own opinion of its merits in an English dress, and it is not my purpose to dwell upon it further than to point out that it is the first of Ibsen's plays written in that limpid simplicity of current modern prose which stamps his dialogue in all his later work with unsurpassed verisimilitude and naturalness in the original, and with the inevitable appearance of baldness in even the best translation.

"The Youthful League" checked Ibsen's rising popularity. It was received with indignation in his native land. The philosophical observer may find much food for reflection in the fact that the people which not only admired, but positively exulted in "Brand" and "Peer Gynt," indignantly resented the "Youthful League." But this, too passed away. My copy bears the date of 1883, and shows that in that year the work reached its fifth edition.

After writing these three plays, Ibsen at last returned to "Julian the Apostate," and in 1873 the two dramas, respectively entitled "Cæsar's Apostasy" and "The Emperor Julian," but also embraced under the common title, "Emperor and Galilæan," made their appearance.

In some respects this is the most ambitious, as well as the most bulky, of Ibsen's works. It has great merits, so great, indeed, that it would not be easy to exaggerate them; but yet it is almost the only one of Ibsen's published works that can fairly be called an artistic failure. Critics, I think, are substantially agreed on both these points. The drama gives evidence of a historic sense, the more remarkable since Ibsen was presumably not much of a Greek scholar, and must have depended largely upon translations and secondary sources for his vivid reconstruction of the epoch of Julian. The intolerable atmosphere of suspicion, hypocrisy, and

treachery in which Julian passed his youth; his own timid, feverish, superstitious, yet attractive character; and the heroic potentialities which never rise into heroism, the talent which never becomes genius, the capacity which never ripens into greatness, and the all-penetrating, all-corroding vanity that are the distinctive characteristics of Julian, are thrown into vivid relief in the first of the twin dramas. In the second we witness the moral and intellectual collapse of a fanatic who lacks inspiration. Julian is a pedant, not a prophet; and his pedantry swallows up his humanity, and dictates actions as revolting and less excusable than the wildest excesses of the Christian fanatics. But he never can adopt the *rôle* of a persecutor with a whole heart. He is ashamed of himself, and is half conscious all along of the hollowness of his own cause. He is engaged in a hopeless struggle against fate, and its hopelessness does not bring out the tragic grandeur of his nature, but saps his force and vitality, and reduces him to insignificance, indecision, and at last to mere helpless superstition and crazy arrogance. It is a relief to all, a relief chiefly to himself, when he receives his death wound, can drop the weary struggle, and can cry, "Galilæan! Thou hast triumphed."

The whole picture is drawn with deep insight both historical and psychological. But it cannot be denied that the dialogue often drags and sometimes overstays the climax; and that the second of the two dramas has no sufficient development, and no sufficient interest to sustain it, at any rate through the first three of its five long acts.

But in spite of all this, there is, perhaps, not one of Ibsen's works which the serious student of the social plays can less afford to ignore than the "Emperor and Galilæan," for here if anywhere, Ibsen sets forth his formal creed.

Julian perceives rightly enough that the official Christianity of his day is hollow and hypocritical. It does not

make men spiritual, but it lays a ban upon their earthly enjoyments, and corrupts and corrodes them. It has quenched the beauty of the old pagan religion of joy, and has planted in its place a grovelling religion of superstition, of fear, of bargaining, and of treachery.

But now that it has once come and has made the old religion wither, as under a blight, it is vain to endeavor to recover that old religion again. A man may seek relief from the present by transporting himself into the past, but he cannot bring back the past into the present and make it live again.

When Julian has been crowning his brow with vine-leaves, and seeking the fresh life of joy and freedom that reigned of old, and has then fallen into a conversation that stirs in his heart thoughts of the passionate earnestness of the early Christian spirit, he cries out that the only real life is to be found in the fire of martyrdom and the crown of thorns; and as he strikes his hand upon his brow, it falls upon the vine crown! Sadly he removes it and gazes on it, then flings it away with the bitter cry, "The new truth is true no more, and the ancient beauty is no longer beautiful!"

And yet he perpetually strives to recover that ancient beauty, though he feels that it is now hateful. As he rides through the streets in Bacchic triumph with the panther skin thrown over his shoulders and the wild chorus of revellers round him, he tries to imagine that he is restoring ancient beauty; but no sooner is he alone than he feels the hideous hollowness of the whole thing. Is a band of drunkards and harlots paid to sport in the streets, while the abashed or amused crowd stares in bewilderment, or raises a mercenary shout to please the Emperor,—a shout with no joy, no conviction, no ring in it—is this beautiful?

Beautiful? Nay, he cries out for a bath, a bath for the body and the soul, to wash away the stench of it!

And thus in the war of philosophy against superstition, of toleration against fanaticism, of beauty and freedom against anxious earnestness, he has changed sides without knowing it. He finds himself engaged in a crusade against luxury, worldliness, and indifference. He strives to lay a new consecration upon men, instead of leading them back into frank and free enjoyment of life. The Galilæan has laid a spell upon the world, and his foe can no more escape it than his followers can.

It is clear enough, then, where Julian is wrong. But what would have been the right? The Christianity he knew was rotten. He could not acquiesce in it. But the true way out of it into something better lay forward, and not backward.

This doctrine is expounded—in a jargon which, it must be confessed, severely tries our patience—by the mystic Maximus. The "Third Kingdom," which is neither that of the Emperor nor that of the Galilean, and yet is both; which is neither that of the flesh nor that of the spirit, and yet both; neither of beauty nor of truth, and yet both,—the "Third Kingdom," the consummation and harmony of its imperfect predecessors, towards which all rebels against what is have dimly felt their way, which none can describe because none have seen the unborn—this "Third Kingdom" is to be reached *through* the past and the present. Infancy has its beauty, which dies, but is not lost when youth swallows it up. Youth has its beauty, which dies, but is not lost when manhood succeeds it. You cannot go back to *recover* infancy; you must go forward to *preserve* both it and youth transfigured and embraced in manhood.

Thus decisively is the reactionary solution of social and religious problems rejected. When the truths that once inspired men have become mere catchwords, salvation lies in an advance which will recover and reincorporate, while

transmuting and transforming, their essential spirit, not in a retreat which will attempt to preserve the perishing or resuscitate the dead formulæ.

And again: the mere fact of any truth being accepted, recognized, formulated, patronized, enforced, and established, itself tends to make it a lie; for it tends to become a convention instead of a formative power, a tradition instead of a conviction, a profession instead of a belief. Hence Julian's established Paganism has all the vices of the established Christianity it superseded, in addition to its own reactionary unreality; and the only vivifying power which his zeal for Paganism really exercises is its purifying influence upon the Christianity which he persecutes. In this, and in this only, he is really effective; for he thus helps to re-invigorate the Christians, and push them forward towards the new truths they had ceased to seek.

Such, I take it, is the meaning of the "Emperor and Galilæan;" and it will be seen how closely it all bears upon the faiths and scepticisms, the advances and reactions of our own day; and what a flood of light it throws upon Ibsen's attitude towards all the problems of modern life in the social plays. . . .

And thus we have come to understand the meaning and the mission of the "poet of doubt."

Is it not enough after this merely to enumerate the social plays? "The Pillars of Society," "The Doll's House," "Ghosts," "The Enemy of Society," "The Wild Duck," "Rosmersholm," "The Lady from the Sea," "Hedda Gabler."

Well has the "poet of doubt" fulfilled his mission. If he were the mere cynic, with no eye to beauty, and no belief in nobility of character, who can only see, and only cares to see, what is foul, mean, or repulsive, he would, indeed, have little enough significance for us. But we are speaking of

the creator of Lona Hessel and Martha Bernick and her sister, of Dr. Stokman and his wife and daughter and seafaring friend, of Hedvig Ekdal and Juliane Tesman. For myself I could add many more, but their names might be challenged; and these are enough to vindicate the poet of doubt from the charge of indiscriminate cynicism.

Again: the poet of doubt is not the poet of negation. We have had many apostles of negation, who thought they had found the formula of emancipation in the gospel of reason, and the negation of all that reason cannot render an account of. How many of them could stand before Ibsen's judgment-seat, and come away with the same light-hearted conviction that everything which they could not demonstrate was mere superstition? Surely the terrible poet of doubt will not spare them any more than other believers. There is many a one besides Fru Alving who holds that any feeling for which he cannot give a reason is a mere "Ghost." Do they know the meaning of their creed? Let them go with her through the horrors of that night in which she is called upon to judge whether every instinct of her nature, and at last whether the very central purpose and passion of her whole being is a mere "ghost," and they will, at least, come forth from that ordeal chastened and sobered, with the glib confidence in their independence of the past shaken as perhaps none but Ibsen could shake it, with the knowledge that they have hardly begun to ask the questions they thought they had already answered.

Or where can we find anything more searching than the light thrown in "Rosmersholm" upon the self-deceptions of a man and woman who think that, in their relations one with another, they can ignore the garnered wisdom and experience of ages, and dismiss, as superficial conventions that have no reference to them, the resultant beliefs and mandates of society? Or where can we find a bolder or more

virile representation at once of the necessity and of the danger of the rupture with an established moral or religious order already antiquated, but not yet replaced, than is embodied in this same "Rosmersholm"?

Or yet again: if you think you have got the formula of life in a war cry against conventional reticence and lies, and a belief in probing instead of skinning over wounds, go with Gregers Werle on his crusade, and learn how easy it is to think you are setting a man's feet upon the rock of truth when, in fact, you are calling upon him to act on principles he only respects at second hand, and to profess sentiments he neither feels nor understands.

But where am I to stop? There is scarcely one of Ibsen's social plays which we can read without being forced to admit that we had somewhere stopped short of the full meaning of our own questions, and accepted an answer that concealed from us the duty, and robbed us of the strength, of deeper questioning.

The poet of doubt has, indeed, fulfilled his mission! But people say he is "immoral." What do they mean?

Do they mean that the moral nature is braced by the habitual contemplation of noble and beautiful things; that it is dwarfed and poisoned by habitual contemplation of horrible, foul, or ignoble things; that there are some who delight in unwholesome familiarity with what is hateful, and some who are banefully fascinated by it, even while they loathe it; and that Ibsen is therefore a depressing moral influence?

If this is what is meant I believe there is truth in it. I doubt not that Ibsen has done, is doing, and will do, moral harm to some of his readers. The same may be said of Thackeray. And—for very different reasons—the same may be said of Goethe, of Carlyle, and of many more. There are minds capable of deriving harm, and perhaps incapable of deriving good, from Ibsen as from these others.

But do people mean more than this when they say that Ibsen is immoral? Do they mean that he makes vice seem attractive, or that he stimulates the imagination to vicious activity? I cannot conceive of such a charge being intended by any man who has read Ibsen; but, unhappily, many use language calculated to convey to those who have not read him the impression that this is the charge they bring.

Or do they mean that Ibsen's writings tend to confuse moral issues, and therefore to weaken moral restraints? Inasmuch as his works have a terrible solvent power, they may indeed tend to reduce a man to a condition of ethical agnosticism, with all its attendant dangers; but this may be said of all who challenge accepted ideas; and Ibsen is singularly free from the sin of representing a tinsel nobility as genuine, or failing to appreciate the true ore of humanity wherever it is found. In Ibsen, as in Thackeray, the moral *stress* is always true.

But what really lies at the basis of all morality? Is it not the sense of the magnitude of the issues of our thoughts, words, and deeds? He who saps, deadens, or overbears the sense of responsibility, is the really immoral writer. Will any one bring this charge against Ibsen? Who, in our day, has brought home with greater force the significance to others of what we do, what we think, and what we are, than Ibsen? Or who has made us feel the responsibility sitting closer to us for frivolity in rejecting, or hypocrisy in accepting, the current code and creeds of society?

But enough of this cheap reproach of immorality. Let us turn again to the central problem of Ibsen's social plays. That problem I take to be the relation of the individual to his social and personal surroundings. Everyone who has given a moment's serious attention to social facts knows that our personal and individual life comes to us in and through

our "human environment," and can only express itself fully and richly when it goes out towards, and in some sense loses itself in, the life of others. And yet this "life of others" constantly presents itself to us as a hampering and dwarfing power, forcing conventions and unveracities upon us, and preventing us from ever becoming ourselves. "To be oneself is to slay oneself." Yes, but, unhappily, there are many other ways of slaying oneself besides self-realization; and many there be that find them.

Now, there is one special case of this problem of self-surrender and self-realization so obvious and so complex that it cannot fail to have a quite specific attraction for Ibsen; and, moreover, conventional morality and tradition choose persistently to ignore its true nature. It is the problem of a woman's life when she marries. Here is a special field for the bold questioner, whose voice, once heard, may be cursed or ridiculed, but cannot be forgotten.

If a woman has a life and individuality of her own before she marries, she is called upon to reconcile self-realization with self-surrender in a manner so conspicuous that the blindest cannot fail to see it, when once their attention is called to it. Fatherhood is an incident. Motherhood is an occupation. A man marries and apparently remains himself. When a woman marries she becomes someone else. She changes her name; she changes her home; she changes her occupation; and her new name, her new home, and her new occupation are determined by her husband and her children. Hence marriage, regarded from the woman's point of view, is the problem of society, focused and epitomized—the problem of self-realization in and through self-surrender. The same problem meets us all, men and women, in all the relations of life; but in none is it so obvious and so tangible as it is here. Again, the change in a woman's life when she marries is so great that it may

seem to offer her an almost complete escape from conditions that oppress and confine, or haunt, or tease her. She may have at least the appearance of reason on her side if she separates herself from her circumstances and refuses to believe that she is herself the greatest and most important factor in her own life. She may pant for an escape, and may believe that marriage will give her a career. A man may look to marriage for many things, but hardly as in itself opening a career to him. Hence, a woman's temptation to a refined form of mercenary motive in marriage. When she seems to be giving her heart to the man who loves her, she may be in truth bartering herself to him for a position and a career.

Ellido. Now, just listen, Wangel. What is the use of our lying to ourselves—and to each other?

Wangel. Lying, do you say? Is that what we are doing?

Ellida. Yes, that is what we are doing. Or, at any rate, we are hiding the truth. For the truth, the pure, clean truth, is just this, that you came out there—and bought me.

Wangel. "Bought"! do you say "bought"?

Ellida. Oh! I wasn't an atom better than you were. I agreed to it. I went and sold myself to you.

Wangel. Ellida! have you really the heart to call it so?

Ellida. But what else can I call it? You couldn't endure the void in your house. You were looking about for a new wife.

Wangel. And a new mother for my children, Ellida.

Ellida. Well, perhaps, incidentally, though you hadn't the least idea whether I was fit for the position. You'd only seen me and talked to me once or twice. And you took a fancy to me, and so—

Wangel. Yes! call it whatever you please.

Ellida. And I, on my side—there was I, all helpless and resourceless, and utterly alone. It was so natural for me to fall in—when you came and offered to look after me for all my life.

Ellida feels that she was forced into the transaction which she calls a sale and her husband calls a marriage. At the very time she is speaking thus to him, Bollette is arranging a transaction, very different in its terms, but identical in its

nature, with Arnholm, Nora Helmer and Fru Alving presumably drifted into marriage, and promised to surrender themselves before they had come to any consciousness of who and what they were. Not one of them had any real choice, or knew what she was doing. If they had had a choice they would have known that their problem was the problem of life—to find oneself by losing oneself.

I am convinced that it is in this typical significance of marriage, and not in any special interest in the so-called "woman question" as such, that we are to seek the reason of Ibsen's constant recurrence to this theme. Suppress individuality and you have no life; assert it and you have war and chaos. The principle of life is found when we can reconcile the strong utterance of self with self-abnegation; and the necessity of harmonizing these two is absolutely forced upon us when we think of marriage. The mere freedom of choice on which Ellida Wangel and Nora Helmer lay such stress is but a condition, not a principle of healthy life. Hedda Gabler neither drifted nor was forced into marriage; but she deliberately and shamelessly paid the flattered and delighted Tesman in the forged coinage of love for opening to her a retreat from the career she had exhausted, and an entry into the best career she could still think of as possible; and we see the result. Without the spirit of self-surrender free choice will never secure self-realization.

Ibsen may well say that his *forte* is asking questions, not answering them! In this particular matter his questioning began early. And this brings me to the only part of my proper task which I have not yet attempted. There is one of Ibsen's most celebrated and most brilliant metrical dramas that I have not yet so much as mentioned. It is his first work on the conditions of modern society, his first satire, and the first utterance that roused that indignant resentment

which has from time to time flamed out against him from that day to this.

I refer to "Love's Comedy," written in 1862, when Ibsen was still living in Christiania. Its subject is love, courtship, and matrimony, and its hero and heroine are Falk (or Falcon), a young poet and author, and Svanhild, the eldest daughter of the lady with whom he boards.

To us Englishmen there is always something supremely ludicrous in the approved Continental customs and ideas concerning courtship; and Ibsen's relentless satire will be keenly enjoyed by all Englishmen who are fortunate enough to be able to read it in the original. But how can I give those who are not in that happy position any conception of the bevies of fluttering maids and matrons that thrill with delight at the announcement of another engagement, of the excitement which pervades them on the report of a "little misunderstanding" between the newly-engaged couple, of their officious zeal in bringing about a "reconciliation," of their rapturous exclamations when one of them sees Lind kissing Anna's glove, of their vexation and disappointment when the lovers seem tired of being exhibited, of their dismay when the poor harassed "quarry," as his friend calls him, escapes for a moment; of the clergyman who seizes every occasion of solemnly descanting on the beauty and sanctity of domestic joys, and waves his hand towards the eight daughters (out of twelve!) who are on the scene, with their mother, as living tokens and pledges thereof; of the sobbing matron, who, with her handkerchief at her eyes, tenderly dwells upon her "record" as a match-maker, "seven nieces—and all of them with boarders"!

And yet, when the curtain falls upon husband and wife and engaged couples, old and new, kissing each other two and two, to a grand chorus of the "triumph of love!" it it difficult to exaggerate the sense of desolation which

swallows up and overwhelms all amusement, and makes the concluding scene of "Love's Comedy" one of the saddest pieces of writing in Ibsen's works.

Falk has noted from the first with disgust and scorn how all this "officialism," as it were, marks the grave of love. As soon as a "lover" is promoted to the recognized privileges of "my love," the poetry is gone out of life. Falk looks upon the parson, who braved public opinion and risked all his future in early life, for the girl he loved, and who is now the very embodiment of commonplace, conventional, worldly respectability; upon Styver, who once wrote poetry by the ream, and did not *mend* his pen, but *tuned* it, and who now treats his *fiancée* with an almost more than *marital* indifference; upon his friend Lind who was intoxicated with love till his engagement was announced, and now forlornly seeks a moment's escape from Anna and her friends and aunts,—he looks upon all these as *corpses*. Only he and Svanhild, who do not wear their hearts upon their sleeves, who—so far from parading their love—have never uttered it even to one another, and like a modern Benedick and Beatrice are at perpetual war with each other, only they are alive!

But of course this cannot last. A misunderstanding forces Falk into a passionate declaration lest he should lose Svanhild too soon; but his declaration has in it the sublimity of masculine selfishness and arrogance which Ibsen knows so well how to paint. He is a Falcon, and he must fly against the wind! He needs Svanhild's support and inspiration to achieve the height of his poetic calling. It is her glorious mission to protect his belief in beauty and love from "falling" like Adam, during all the spring of her life and his; and when she has performed this noble mission and the leaves begin to fall in autumn, then the world may claim her, and their ways will part. The whole rela-

tion of course is to be a purely spiritual one, the idealism of which will not be soiled by the vulgar cares that make courtship and matrimony the grave of love!

Svanhild, in answer, reads Falk a lesson under which he writhes. But the result of it is to make him resolve with such intensity as he never put into anything in life before, to win her as his wife, and prove, up to the hilt, the falsity of the creed which he himself held but now. For true love need not shrink from any test and strain of practical life; and the vital breath has deserted all these spouses and betrotheds, not because they have left the ideal for the real, but because they themselves are of the earth, earthy. He and Svanhild will prove that is so.

His satire becomes fiercer than ever now, but there is a ringing tone of triumph in it, and when he gives as his toast amongst all the pairs, married and to be married, "the late lamented love," he knows that his own love is victorious.

And so it is. Svanhild is won. She and Falk, side by side, will wage war against the miserable conventions and pretences of love, and will live the reality.

Then comes Guldstad, the rich middle-aged merchant, and explains to Falk and Svanhild that marriage is after all a very practical business, involving many considerations that have not the least connection with love. You are in love with a *woman,* you marry a *wife;* and a wife has to do and be many things that a lover, blinded by his love, does not consider. Guldstad himself does not profess to be in love with Svanhild, but he is convinced that she would make him an excellent wife, and he can offer her the quiet stream of a warm and friendly affection and respect, a sense of the happiness of duty, the peace of home, and mutual bending of will to will, a tender care to smooth the path of life for her, a gentle hand to heal her wounds,

strong shoulders to bear, and a strong arm to support and lift. Can Falk offer her as much? If so let her take him, and he, Guldstad, who has no belongings and no claims upon his wealth, will deal with them as his son and daughter.

Then Guldstad leaves them together. Their love cannot bear the test he has applied to it. *Would* it last in all its triumphant glory, they ask, right on till death? It is so much more than Guldstad has to offer now, but if it should fade and pine, and die down into mere friendship, what a fall were there!

"It will last long," says Falk. But Svanhild answers, "'Long!' 'Long!' Oh wretched word of beggary! How will 'long' serve love's turn? It is death's sentence; mildew on the seed. 'I hold that love has life eternal' shall no more be sung; and the cry shall be, 'A year agone I loved thee!'"

Will it really be more than this? Who shall dare to say? Who shall dare to risk it? Not Svanhild. No! Their love shall know no autumn. It shall remain forever with its beauty undimmed. Their midday sun shall know no setting! And Falk accepts her decision. She is his love, but must never be his wife. Only by leaving and by loosing her can he win her truly.

So he goes his way. The bevies of ladies eagerly repeat the news, "She's rejected him! she's rejected him!" Her mother presses Guldstad's eligible offer upon her. She asks for a respite "till the leaves are falling;" and as all the "pairs" exult over the discomfiture of the arch-enemy, Falk, who has met his deserts at last from Svanhild, Guldstad offers her his hand, which after an involuntary start, almost a shudder, she meekly accepts, and the curtain falls upon "the triumph of love."

What did Ibsen mean by it all? Was the creed of Falk

and Svanhild his own? If so he here fairly succumbed to the danger indicated in some of his poems, and fell into the twin vices of sentimentality and cynicism. For I take it that a man who regards the passion of love as the richest and most beautiful thing in life, and who also holds that familiar human intercourse is essentially and necessarily destructive of it, is at once a cynic and a sentimentalist. The real is incapable of being idealized to him, and therefore he is a cynic; and his emotional life is essentially unreal, therefore he is a sentimentalist.

But was this Ibsen's creed? I cannot tell. In any case "Love's Comedy" was a comparatively early work, and though it bears a distinct relation to Ibsen's maturer representations of love and marriage, yet it does not embody them.

Guldstad's sober but earnest conception of marriage as a deliberately considered choice, involving manifold relations not to be entered into lightly, and affecting every branch of practical life, remains the keynote of Ibsen's treatment of the subject. And observe that, in all this, marriage is a type of human relationships in general. There is nothing specific or unique in it. Now, the love that draws the opposite sexes one to the other is something quite unique, but not specifically human. It pierces right through the animal and vegetable kingdoms. It is organic and pre-human in its origin.

Remember that profoundly suggestive saying of Peer Gynt's. He had desecrated his relationship to Solvejg, and he says it cannot be patched up again. A *fiddle* can be mended, but a *bell* cannot. A fiddle, with its delicate mechanism, is *constructed,* and when constructed it can be tuned, patched, replaced in pieces, broken and mended. A bell is cast whole in the one molten rush that creates it. It has one note, a note that appeals to something in us

deeper than all art, not to be analyzed, in one sense not to be developed, to live unchanged—till the bell cracks, and then to be gone forever.

What we call "falling in love" rings the bell-note in our lives. In its mysterious infra-and-supra-human simplicity it thrills down to the very roots of our organic nature, and fills us with the sense of a more than human life. Where it is absent the union of the sexes is unhallowed, and becomes what Ellida calls it, a bargain and a sale; and for men and women who buy and sell in this matter there should be but one name. But marriage is a great deal more besides this "bell-ringing." It is a many-sided and complicated human relationship, and the bell-note, however clear and true it may ring, does not suffice for married life. Details which you may call prosaic if you will enter into the duties of husband and wife. They must be to each other much that partners in business must be, much that servants or other employés must be, much that friends and advisers must be. In a word, their life together must be built up and constructed out of many parts and pieces, to the harmonious fitting of which friendship, good-will, kindly forbearance, and consideration are essential, but which are not secured by "love" in the narrower sense, and may exist without it. And if a man and woman who are "in love," but are not suited to enter into the complicated relations of husband and wife with each other, none the less marry, there is indeed nothing unhallowed in the fact of their union; but the bell is pretty sure to crack ere long. And what is there left then?

Off they go pell-mell to the altar, set up a home in the very shrine of happiness, pass a season in an orgy of triumph and faith; and then comes the day of reckoning, and lo, and behold! the whole concern is hopelessly bankrupt. The wife's cheek is bankrupt in the bloom of youth,

and her heart bankrupt in the flowers of thought. The husband's breast is bankrupt in victorious courage, bankrupt in every glowing spark that was struck of old; bankrupt, bankrupt is the whole concern; though they two entered life as a first-class firm of love.

Then does Ibsen teach that because "falling in love," though it be never so many fathom deep, gives no sure promise of wedded happiness, therefore the element of passion should be ignored in marriage? I cannot tell. But this is certain, that he lays the stress of his representations not upon the truth that being "in love" is essential to an ideal marriage, but upon the other truth that it is not enough for an ideal marriage.

He seems always to represent "love," in the romantic sense, in its misleading and delusive character. Johan Tönnesen is in love, and in consequence he does not "so much as see" Martha Bernick, who had been tried and found as true as steel, and who was made to be the companion of his life; and he marries a girl of whom he knows nothing. Torvald Helmer is in love—note that—in love after many years of married life, still thrilled by the same magnetic influence, still finding in Nora's society the same unreasoning and unanalyzable delight which first drew him to her. And therefore he thinks himself a model husband, when really his relations with his wife have never risen above mere organic attraction, and have never been human at all. Rebekka West is in love, and her love leads her into depths of treachery and cruelty that make "Rosmersholm" one of the most appalling of Ibsen's dramas; and Rosmer himself is in love, and his love drives him to leap with Rebekka into the dark pool below the foss. And lastly, Ellida is in love, and in her the untamed, pre-human nature of love, as Ibsen conceives it, comes out in its full significance. Like the heaving of the sea to the moon, like

the craving of the stranded mermaid for the deep ocean, unreasoning, and not to be reasoned with, dark and deep and wild, this elemental drift and upheaval of our nature must be tamed and mastered, that our relations, one with another, may be sober, well-considered, and human.

And is this all? Does Ibsen know that in considering marriage in this sober, human, rational style, he is leaving out the specific element in it, and dealing with it only as typical of all human relationships? Does he ignore the truth that in the ideal marriage the bell-note rings from first to last, and that all else is dominated and glorified by it? Does he know that it is only that "love" which has its roots far down beneath our humanity that can raise marriage, as such, into a truly human relationship? I will not answer for him. There are indications, deep rather than numerous, especially in "The Doll's House" and in "The Lady from the Sea," that he knows all this as well as any of us. But at any rate he does not choose to dwell upon it. He chooses to dwell upon marriage under its other aspects. And can we afford to be ungrateful to him? How many marriages are there that, tried by the ideal standard, will not be found wanting? They may be few or many, but at least they are something less than all. And what of the others? The bell is cracked. Are husband and wife simply to sit down and say that life is a failure, or at least that they can be nothing to each other now? Surely they may be much. The tenderness of considerate friendship, and the mutual helpfulness of loyal partnership are not love, but in their measure they are beautiful and life-giving; neither is love a substitute for them, even where love is. That the bell is sound, or that the bell is cracked, is an equally foolish reason for not mending the broken fiddle, or tuning its neglected strings.

With respect to marriage, then, I do not find in Ibsen

the highest truth insisted on with any distinctness or directness. He even leaves me in doubt whether he is not profoundly mistaken in his teaching; but he works out some aspects of the problem with a piercing insight and a relentless truth, for which I have no words but those of grateful admiration. If I can find the husband and wife who show me that they have read and understood "The Doll's House," "Rosmersholm," and "The Lady from the Sea," but that they had nothing to learn from them, then I will lay down Ibsen, and ask leave to sit at their feet. But I do not expect that this will be either to-day or to-morrow.

The strength and the weakness of Ibsen's much discussed treatment of marriage lies in the fact that he does not deal with it as marriage at all, but as the most striking instance of the ever recurrent problem of social life, the problem that we may hide in other cases, but must face here, the problem of combining freedom with permanence and loyalty, of combining self-surrender with self-realization.

When Ibsen turned his back upon "the dear North," and tried to forget the life that lay behind him, he bathed his soul for a time in the warmth and beauty of Italy.

His thoughts and studies turned to the ancient world, and he planned and partly executed the work that afterwards grew into the two plays, of which Julian the Apostate is the hero.

But the spell of the North was still upon him. It forced his mind back to the bleak and chill home of his childhood with all its freezing memories. The unfinished work was set aside, and before it was taken up again and completed, "Brand," "Peer Gynt," and "The Youthful League" had flowed in rapid succession from Ibsen's pen.

In "Brand" the poet turns fiercely upon his native land, but amid all his passion and contempt learns and tells the truth that there is no redeeming power save in love.

Brand is a young Norwegian clergyman, to whom the heroic age has vanished, and who regards his contemporaries as a paltry, timorous, and sordid race, who plead their own self-inflicted feebleness as the excuse for shrinking from every sacrifice, who believe they have been stamped as farthings in the mint of God, and are content to have it so, and who are yet not content to give up all pride in the past, and all aspirations for the future, and frankly own themselves the slaves of earth. He finds them striving to be a little of everything, to have a little faith and earnestness for use on Sundays, a little patriotism for national anniversaries, a little hilarity and good-fellowship for festive occasions after work, a little recklessness and abandon in making promises, a little caution and sobriety in fulfilling them, a little attachment to the good old times and their customs and memories, a little perception of the changed spirit of their own day. Their life is all broken up into fragments, and each fragment hampers, contradicts, deadens all the rest so that they can never live a full *life*.

Their religion is in perfect keeping with all this. One might perhaps think that their very materialism had, at least, given unity to their lives—but no, it is haunted and broken by memories of a spiritual religion that make a discord with it. Men still repeat the Lord's Prayer, but there is a line of it that is winged with will and has in it such deep and anxious insistence of demand as will launch it heavenwards with the full ring of prayer, save the fourth petition: "Give us this day our daily bread." This has become the people's war-cry and the password of the world. Wrenched from its context and stamped upon every heart this prayer remains—the storm-tossed spar that tells of the wreck of faith! Yet this very survival is the testimony that men are not contentedly and whole-heartedly material. They snip and trim the kingdom of God till it can all get

inside the Church walls, but they must have "a little" of it. They have none of the fresh manhood of faith that can bridge over the chasm between spirit and flesh, but they still haggle for "a little" of the spiritual consolations now dealt out in retail by the ecclesiastical hucksters. "A little" idealism and spiritual exaltation is quite essential as an element in their existence.

Into such a society Brand leaps with his awful and heroic motto, "All or nothing," and in the name of the jealous deity who "will have no other gods by his side," seeks to build up human nature into unity, to remake, out of these stumps of soul and torsos of spirit, out of these scattered heads and hands, such a whole that God may be able to recognize once more his noblest work in man.

For the current religion Brand has neither sympathy nor even pity—nothing but scorn. The God men worship is a superannuated and feeble dotard, that did miracles long ago, and was once a jealous God, but is now quite easy-going, and content with his fragment of the human heart, willing enough to accept the service of one day out of seven, and altogether past working miracles. The very doctrine of Christian redemption has made men look upon themselves as no longer called upon for any sacrifice as long as they formally assert their claim to a share in the great sacrifice made for them long ago.

Against this miserable, sordid, and decrepit religion Brand declares war to the death. Better become frankly material and godless, better give oneself up to the world and become an acknowledged muck-raker on the one hand, or Bacchanal on the other, than cheat oneself with such a sham. It must be "everything or nothing," and if there be a God to serve, then his service must be "everything." And such a God there is. If we must picture him under human form, then he is no benevolent and weak old man;

he is young and strong as Hercules, his love is the love that could listen to the prayer of anguish in Gethsemane and yet *not* take away the cup. He demands the whole life and will accept no less. He who offers God one-seventh or one-half, or nine-tenths of his life flings it into the abyss—it must be *all* or *nothing*. Brand's God can still work miracles, and the life that is given wholly to him may still be divinely harmonious as of old.

When we first see Brand he is fired with the thought of preaching this living God to all the world, and, as he contemptuously puts it, burying the dead God that men still profess to worship.

With the so-called "practical" spirit of the age he has little sympathy, still less with its tolerant and humane culture. Its "practical" spirit means putting material things before spiritual, with the poor hope of achieving a true humanity by means of increased material appliances. It thinks a new road and a new bridge of more pressing consequence than a bridge between faith and life, fails to see that until we are men we heap up wealth in vain, and if we are men we do not need it. And the humane and tolerant spirit of the age is only a fine name for indifference to truth, for weak shrinking from giving or bearing pain, for dissipation of energy,—for the devil's breath of compromise and cowardice.

To this man, with his motto, "All or nothing," there is no common measure between material and spiritual things. You may stay your steps on God's errands because you *can* not go farther, but never because you *dare* not, or because you *will* not. If his way leads him over the crevasse-crossed glacier, and the mists fall upon him as the ice rings thin and hollow beneath his feet, and the roar of the hidden waters threaten him with instant death, he has no thought of pausing or turning back. It is enough for him that he

can go farther, and while his peasant guide leaves him in mortal terror, though his dying daughter lies on the other side of the snow-field and cannot be at peace without seeing him, the intrepid priest, with no reason to cross to-day rather than to-morrow, save that each day is a day to be devoted to his mission, pursues his way.

No physical suffering moves him. He passes untouched through the starving town, where the blue-grey ring round every hollow eye shows that death is holding his assize, and is only moved to a deeper scorn when he sees that the scourge brings out the brute rather than the angel in the sufferers. But a tale of the mental anguish of a father who has slain his child that he might not see it starve, and now himself lies dying, stirs him to deepest compassion, and in a storm through which even the wife of the dying man dare not venture with him, he crosses the fiord in an open boat to stand by the bed of the murderer and suicide as the messenger of God.

Then the call comes to him to relinquish all this thoughts of a crusading march through his land, and an attack in the face of all the world upon the idols it serves, and to bury himself in a sunless town on a remote fiord, where the memory of his lonely childhood broods like night over his soul, where his miserly mother, who bartered away her soul for wealth in her early days, and hopes to save it in her old age by dedicating her son to the Church, oppresses him with her unreclaimed sordidness, and where every influence seems most hostile to his life-work.

And yet in truth the sacrifice is no sacrifice at all. For Agnes has already convinced him that his crusade must be fought out at home and not abroad.

And who is Agnes? We see her first, with her lover, Einar, the painter and poet, in the sunshine and beauty of the morning on the hill-side.

Einar. Agnes, my beautiful butterfly, thee will I capture in sport! I am weaving a net with meshes so fine, and the meshes so fine are my songs.

Agnes [*dancing back before him and darting out of his reach*]. If I'm a butterfly little and fine, then let me still sip from the ling-bloom; and if you are a boy that delights in his game, then chase me, but catch me not ever.

Einar. Agnes, my beautiful butterfly, now have I woven the meshes; sure your fluttering flight will avail you naught—soon you sit in the net fairly captured.

Agnes. If I'm a butterfly young and bright, rejoicing I swing in the sport; but should I be caught 'neath your woven net, then brush not against my wings.

Einar. Nay! With such care on my hand will I lift thee, and lock thee right into my heart; and there shalt thou play thy whole life long the gladest of games thou e'er knewest.

But when Agnes hears Brand speak of the feebleness and poverty of the age and of the stern gospel it needs, she wakes from her butterfly existence as from a dream. It is in vain that Einar strives to pick up the thread of sport where they dropped it. Agnes answers him without hearing, and in her turn asks, without looking at him, in a hushed whisper as if in church: "But tell me, did you see —how he *grew* while he was speaking?" Then when Brand is ready to cross the storm-torn fiord and none dares to go with him, Agnes bids Einar join him, and when he shrinks back in terror the whole world-ocean stretches between him and her. She herself leaps into the boat and braves the storm with Brand.

When he leaves the death-bed to which he had come to stand between the dying sinner and his fighting soul he sees Agnes sitting in the clear sunshine, rapt as if in a vision.

See how there she sits and listens, as to songs that fill the welkin. In the boat she sat and listened, as it cleft the troubled waters; as she grasped the thwart she listened, listened as she shook the storm-spray from her clear, unclouded forehead. 'Twas as though the sense had changed its seat, and with her eyes she listened.

What is her vision, as she sits there listening with her eyes? She sees the crude forces of an unborn world, with its torrents, its clouds, its lightning glow, its wild winds, its desert stretches, its unmeasured possibilities, waiting to be created—and created by her! For in her own breast she recognizes its counterpart in the swelling of untamed forces like mountain torrents, in the rising light of the new day, in the widening of the reach of life, in the new quickening and movement of thought and deed, as though their hour of birth had come, in the sadness and the joy that are as one, in the divine voice that rings in her ears, "Now shalt thou create, now be created! Now art thou redeemed or lost! Do thy work—thy work of dear account."

When Einar comes and claims her once again she stands between him and Brand. Brand warns her that he is uncompromising in his demands, requiring "all or nothing," that if she fails half way, then all her life will have been flung into the sea, that she must look for no concession in time of need, no yielding to any weakness, that if her life-strength falls short she must face death itself. Einar cries to her that she is choosing between storm and calm, between peace and sorrow, between night and morning, between life and death. And she answers, "Into the night. Through death. Behind, there gleams the morning dawn."

At the beginning of the third act we find Brand and Agnes, with their baby boy, living on the margin of the sunless fiord under the overhanging rock, and we learn something of the progress of his work. He is still true to his old motto, "Everything or nothing." His uncompromising devotion and his overmastering individuality have produced a profound impression in his parish. The commonplace, material, matter-of-fact tradition of the place, impersonated in the bailiff of the town, though not over-

come, is forced into a kind of acquiescence in his leadership, and a new spirit seems to be abroad. And Brand himself is in one sense changed. Till now no strong human affection has ever claimed him. In the home of his youth and at school he was a stranger. A hideous act of covetous heartlessness, of which he was an unsuspected witness, completely alienated him from his mother when he was yet a child. The grandeur and heroism of his character had been untempered hitherto by the personal tenderness the whole wealth of which he now pours out for his wife and child. But Agnes complains that to others his love is still hard, and that in the terrible sternness of his demand, "all or nothing," he repels instead of winning. His old mother yearns with a superstitious longing to receive the sacrament and the assurance of forgiveness from him on her deathbed. He lays down the condition that before she dies she shall give away the whole of that wealth for which she has sinned, and toiled, and pinched, and lived a loveless and sunless life, and shall go naked into her grave. In vain she pleads that he is bidding her scatter her very soul to the winds. He is inexorable. In the anguish of a deathbed repentance she sends messengers to him. She offers half her wealth, at last nine-tenths of it; but is only met with the old answer, "everything or nothing," and dies muttering, "God is not so hard as my son," comforted, so says the almost broken-hearted Brand, by the old lie, looking upon God, as all the rest do, as a good-natured huckster that may be beaten down if he cannot get his full price. And yet this man, now that his love is awakened, is visited in spite of himself by seasons of compunction if not of doubt. To stand before men with his awful "everything or nothing," draws tears of blood from his heart. In loneliness he bites the tongue with which he has chastised, and when he lifts his arm to strike, the pas-

sionate longing comes over him to embrace the weak and sinful brother.

Then comes his own trial. He and Agnes both notice, though neither will confess it, the pale cheek and waning strength of their boy. Surely, says Brand, God cannot take him from them. Yet what if he can? May not God do to-day what "the terror of Isaac" did long ago? Then comes the doctor's verdict. It is certain death to the child to stay another month on the sunless fiord, and Brand in an agony of apprehension orders immediate preparations to be made for leaving their home that very hour.

Then one after another, from the mouth of the doctor himself, from the parishioner who has heard a report that he means to leave them on receiving his inheritance from his mother, from the poor mad girl, Gerd, who is so strangely connected with his fate, from every side come echoes of his own teaching, "all or nothing." He has given up his ambition, he has given up his life to his work in his remote parish, he has refused to yield or to depart, has nailed his flag to the mast and declared that here he will stand or fall in conflict with his foe. He has given much for his work on the fiord. Yet it is nothing if he will not give all. Now he realizes what he has been demanding of others, and stands horror-smitten before his own motto, "all or nothing." Nominally he throws the choice upon Agnes, but not till he has shown her that there is no choice at all. Brand's awful God seems to pass by in the thick darkness before our very eyes as Agnes lifts her child on high and cries—

"God! the sacrifice thou canst demand I can lift up towards thy heaven! Guide me through life's horror!"

When next we see Brand and his wife their child has been lying for months beneath the sod of the churchyard. It is Christmas eve, the children's festival. Brand is not

content with having made the sacrifice; he demands that there shall be no repining, no tender idolatries, no cherished memories making the season of rejoicing into a season of mourning. Agnes must not dwell on the contrast between this Christmas and the last; she must not draw the curtain back that the light may stream upon the little grave; she must not even plead for time and beg her husband to have patience with her. And at last when a wild gypsy woman, with her mouth full of profanity and her heart full of defiance, bursts into the house and begs, or rather demands, the little garments that Agnes keeps as sacred relics, that she may wrap them round her own child born among curses and, as it were, baptised in gin, she must part with all her treasure, must not retain even a single relic—"all or nothing." Agnes has at one point rebelled like a wild thing driven to bay; but now a serene and perfect joy overspreads her countenance, now she is free and triumphant, but as she turns to her husband and thanks him for the strength with which he has uplifted her, and for the awful but now glorious vision of God that he has revealed to her, she bids him remember the old word, "He who sees Jehovah dies."

Then there sweeps upon Brand the vision of his lonely life and strife when Agnes shall be gone, and he folds round her the arms of a giant and declares that she shall not be taken from him. Nor need she be taken. She tells him that if he will sink her down again into the life from which he raised her, it will hide from her once more the God that he has revealed, if he will bid her return to her idol-house and forget his "all or nothing," she will have no power against him as he unteaches any more than she had as he taught. Then she can live and be his wife. But to see Jehovah is to die; and unless he takes her back she must pass on and leave him to fight alone.

"Soul!" cries Brand, "Be steadfast to the last. 'Tis victory's victory to forfeit all. The sum of loss has framed thy gain, only the lost is our own for ever!"

Agnes used to say that the "church was too small," but she could give no account of what she meant by it. The truth was that the church with its associations and forms and traditions oppressed her; and the feeling of narrowness and oppression translated itself into a sense of physical confinement. Everything else was too big for her, she sometimes felt. Her husband, his vocation, his purposes, his presence, his will, his ways; the mountain that overhung her, the fiord that locked her in, her sorrows, her memories, her darkness, her strife, all were too big for her, only the church was too small.

The mad Gerd said the same. The church down there in the valley was poor and hideous because it was so small. She knew of a church up on the mountain height, a church of ice and rock, and snow, where waterfall and avalanche read the mass, and the wind preached amongst the snow-peaks.

And Brand felt that the ruinous and mouldering edifice, with its cramped and narrow walls, was the symbol of the pining and paltry spirit of a religion in its second childhood. He would dedicate his mother's wealth to the rearing of a church worthy of the religion he preached. It should be the symbol of a wider and a stronger faith in which life should find its unity. Its vault should stretch not only over faith and doctrine, but over all to which God has given the right to be human in life—the day's toil, the evening's rest, the cares of night, the fresh delight of childhood—all that can claim a lodgment in a human heart. The river that foams down its course, the waterfall that roars through the cleft, the voice from the storm's great lungs and the sounds that ring from the sea soul-

caught should melt into one with the organ notes and the stave on the people's tongue!

So Brand builds his church-symbol. And from all around the people stream to fill the air with commonplace laudations of his generosity, to give him knowing advice as to the best way of turning his gift to the advantage of the State—and his own; to burn in upon his tortured soul the fact that of all his deeds this one is least understood; to madden him by showing him that his symbol has none but a material meaning for the world; to drive him to fanaticism when he sees that all he does or says feeds the very spirit of commonplace against which he is fighting; to teach him that his church itself has become one huge lie and that its dedication will be his lying reward.

Overladen now with his sorrow and his defeat, and losing all touch with practical reality, goaded yet further on the path he has been taking, and no longer recognising any physical limitations or conditions of his mission, he turns the key contemptuously in the lock of the church door and flings it into the river, and summoning the people to follow him on his crusade through the world, and show that "life" and "God's sacrifice" are one, he leads the multitude up to wild mountain heights whither they follow him in the belief that he is an inspired prophet and can work miracles for their sustenance and glory. When, hungry and footsore, they halt, and learn, in answer to their demands, that they must look for life-long toil, must strip themselves naked of every joy and comfort, that a crown of thorns pressed upon every brow will be their wages, and a free soul their reward, they turn round fiercely upon the "deceiver" and chase him with blows and curses out into the snow-fields.

Weary, bleeding, and alone, Brand now sees as in vision the people for whom he has sacrificed himself, the God

whom he has striven to serve, the home and happiness that he has lost.

Those miserable thralls, whom he has given his very life to raise out of their sordid cares, will sink lower and lower. Their national history passeth before him. He sees them sheltering their cowardice under the plea of feebleness, sitting still while their brethren in Denmark are crushed; bribed by English gold to pollute their land with smoke and their hearts with greed; drawing aside from the great spiritual battles of the world, suffering the old faith to die, and taking no part in establishing the new; for their stake in the world's redemption is too small to fight for. Not for them was the cup drained, not for them did the crown of thorns strike its teeth into the Saviour's temples, not for them the thrust of the Roman lance into his side, not for them the burning of the nails that pierced his hands and feet, not for them the bearing of the cross—the purple ridge that rose upon his shoulder under the leather thong with which the cobbler Ahasuerus smote him, is Norway's "fraction of the passion." These are the men he, Brand, had sought to redeem!

And as for the God whom he had striven to bring men to serve with whole heart, had he not accepted his all and then rejected him? Had he not quenched every light that shone upon his path, had he not suffered him to be crushed in utter defeat, had he not flung back his prayers to him and deserted him in his utmost need?

Through the storm he hears the sentence of doom chanted,

Never, never canst be like him, for in flesh hast thou been made. Do his bidding or desert him, either way alike thou'rt lost! Worm, thou never canst be like him, though thou drain the cup of death! Follow after or desert him, either way thy deeds are doomed. Dreamer! ne'er shalt thou be like him; lands and goods though thou hast lost; all thou giv'st can naught enrich him—for the earth-life wast thou formed.

And in the service of this inexorable and unapproachable God, for the sake of these sordid and unredeemable earthlings, what had he lost? Agnes and his baby boy might yet have been his—may yet be his, for Agnes appears to him, in his fever, and tells him that all the loss and sorrow is but a dream. She is still living, and so is their boy. They may have peace and joy if he will but strike a line through these words, "everything or nothing," and fall into the even easy ways against which he has fought in vain. No, never! If indeed it has been a dream, then he will now make that dream a reality, will lose wife and child and everything sooner than endure the devil's breath of compromise! Whereat the shadowy form of the tempter vanishes with a shriek, "Then die! The world has no use for thee."

Then comes the end. From the mad Gerd he learns more than the wisdom of the wise had taught him. He learns in penitential tears that while the name of Jesus has been on his lips, he has never been bathed in his spirit, that while proudly thinking himself another Saviour by whose wounds the world may be healed, he has not even found salvation for his own poor soul. With still unbroken will, recognizing himself as the poorest thing that creeps the earth, feeling that he stands on the lowest round of the ladder, yet still with fresh hope as new truth breaks upon him, Brand rises to begin his journey anew.

But his weary and shattered powers are spared the fresh trial. For Gerd brings down an avalanche by a rifle shot, and as the great snow-slip sweeps over him and her, Brand cries to God from the jaws of death to answer whether man's modicum of *will* weighs a single grain in the scales of salvation. And as the crashing of screes and ice overwhelms him and fills the valley, a voice thunders the answer, "He is the God of Love."

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TELEPATHY

BY SIR WILLIAM CROOKES

[Sir William Crookes was born in London in 1832. Since 1851 he has given himself to original research in chemistry. In 1859 he founded the "Chemical News" and in 1864 became editor also of the "Quarterly Journal of Science." He is both a practical and theoretical Chemist,—an authority on sewage, beet sugar, dyeing, calico printing; the inventor of the Crooke's tube which led to Röntgen's discoveries; and a theorizer on the ultimate composition of the atom. He is a believer in telepathy, and his deep insight into the laws of radiant energy demands a careful consideration of the hypothesis he explains below.]

The task I am called upon to perform to-day is to my thinking by no means a merely formal or easy matter. It fills me with deep concern to give an address, with such authority as a president's chair confers, upon a science which, though still in a purely nascent stage, seems to me at least as important as any other science whatever. Psychical science, as we here try to pursue it, is the embryo of something which in time may dominate the whole world of thought. This possibility—nay, probability—does not make it the easier to me now. Embryonic development is apt to be both rapid and interesting; yet the prudent man shrinks from dogmatising on the egg until he has seen the chicken.

Nevertheless, I desire, if I can, to say a helpful word. And I ask myself what kind of helpful word. Is there any connection between my old-standing interest in psychical problems and such original work as I may have been able to do in other branches of science?

I think there is such a connection—that the most helpful quality which has aided me in psychical problems and has made me lucky in physical discoveries (sometimes of rather unexpected kinds) has simply been my knowledge—my

vital knowledge, if I may so term it—of my own ignorance.

Most students of nature sooner or later pass through a process of writing off a large percentage of their supposed capital of knowledge as a merely illusory asset. As we trace more accurately certain familiar sequences of phenomena we begin to realize how closely these sequences, or laws, as we call them, are hemmed round by still other laws of which we can form no notion. With myself this writing off of illusory assets has gone rather far and the cobweb of supposed knowledge has been pinched (as some one has phrased) into a particularly small pill.

Telepathy, the transmission of thought and images directly from one mind to another without the agency of the recognized organs of sense, is a conception new and strange to science. To judge from the comparative slowness with which the accumulated evidence of our society penetrates the scientific world, it is, I think, a conception even scientifically repulsive to many minds. We have supplied striking experimental evidence; but few have been found to repeat our experiments. We have offered good evidence in the observation of spontaneous cases, as apparitions at the moment of death and the like, but this evidence has failed to impress the scientific world in the same way as evidence less careful and less coherent has often done before. Our evidence is not confronted and refuted; it is shirked and evaded as though there were some great *a priori* improbability which absolved the world of science from considering it. I at least see no *a priori* improbability whatever. Our alleged facts might be true in all kinds of ways without contradicting any truth already known. I will dwell now on only one possible line of explanation, not that I see any way of elucidating all the new phenomena I regard as genuine, but because it seems probable I may shed a light on some of those phenomena.

All the phenomena of the universe are presumably in some way continuous; and certain facts, plucked as it were from the very heart of nature, are likely to be of use in our gradual discovery of facts which lie deeper still.

Let us then, consider the vibrations we trace, not only in solid bodies, but in the air, and in a still more remarkable manner in the ether.

These vibrations differ in their velocity and in their frequency. That they exist, extending from one vibration to two thousand millions of millions vibrations per second, we have good evidence. That they subserve the purpose of conveying impressions from outside sources of whatever kind to living organisms may be fully recognized.

As a starting point I will take a pendulum beating seconds in air. If I keep on doubling I will get a series of steps as follows:

Starting point.	The seconds pendulum.	
Step 1....	2	vibrations per second.
2....	4	
3....	8	
4....	16	
5....	32	Sound begins to human ear.
6....	64	
7....	128	
8....	256	
9....	512	
10....	1024	
15....	32768	Sound ends to human ear and electrical waves begin.
20....	1,048576	
25....	33,554432	
30....	1073,741825	
35....	34359,738368	Electrical waves end.
40....	1,099511,627776	
45....	35,184372,088832	Light waves begin for human eye.

Starting point.	The seconds pendulum.	
50....	1125,899906,842624	Light waves end for human eye.
55....	36028,707018,963968	
56....	72057,594037,927936	
57....	144115,188075,855872	
58....	288220,376151,711744	X-rays begin?
59....	576440,752303,423488	
60....	1,152881,504606,846976	
61....	2,305763,009213,693952	
62....	4,611526,018427,387904	
63....	9,223052,036854,775808	

At the fifth step from unity, at 32 vibrations per second, we reach the region where atmospheric vibration reveals itself to us as sound. Here we have the lowest musical note. In the next ten steps the vibrations per second rise from 32 to 32,768, and here, to the average human ear, the region of sound ends. But certain more highly endowed animals probably hear sounds too acute for our organs; that is, sounds which vibrate at a higher rate.

We next enter a region in which the vibrations rise rapidly, and the vibrating medium is no longer the gross atmosphere, but a highly attenuated medium, "a diviner air," called the ether. From the sixteenth to the thirty-fifth step the vibrations rise from 32,768 to 34359,738368 a second, such vibrations appearing to our means of observation as electrical rays.

We next reach a region extending from the thirty-fifth to the forty-fifth step, including from 34359,738368 to 35,184372,088832 vibrations per second. This region may be considered as unknown, because we are as yet ignorant what are the functions of vibrations of the rates just mentioned. But that they have some function it is fair to suppose.

Now we approach the region of light, the steps extending from the forty-fifth to between the fiftieth and the fifty-first, and the vibrations extending from 35,184372,088832 per second (heat rays) to 1875,000000,000000 per second, the highest recorded rays of the spectrum. The actual sensation of light, and therefore the vibrations which transmit visible signs, being comprised between the narrow limits of about 450,000000,000000 (red light) and 750,000000,-000000 (violet light)—less than one step.

Leaving the region of visible light we arrive at what is, for our existing senses and our means of research, another unknown region, the functions of which we are beginning to suspect. It is not unlikely that the X-rays of Professor Röntgen will be found to lie between the fifty-eighth and the sixty-first step, having vibrations extending from 288220,-576151,711744 to 2,305763,009213, 693952 per second, or even higher.

In this series it will be seen there are two great gaps, or unknown regions, concerning which we must own our entire ignorance as to the part they play in the economy of creation. Further, whether any vibrations exist having a greater number per second than those classes mentioned we do not presume to decide.

But is it premature to ask in what way are vibrations connected with thought or its transmission? We might speculate that the increasing rapidity of frequency of the vibrations would accompany a rise in the importance of the functions of such vibrations. That high frequency deprives the rays of many attributes that might seem incompatible with "brain waves" is undoubted. Thus, rays about the sixty-second step are so minute as to cease to be refracted, reflected, or polarized; they pass through many so-called opaque bodies, and research begins to show that the most rapid are just those which pass most easily through dense

substances. It does not require much stretch of the scientific imagination to conceive that at the sixty-second or sixty-third step the trammels from which rays at the sixty-first step were struggling to free themselves have ceased to influence rays having so enormous a rate of vibration as 9,223052,036854,775808 per second, and that these rays pierce the densest medium with scarcely any diminution of intensity, and pass about unrefracted and unreflected along their path with the velocity of light.

Ordinarily we communicate intelligence to each other by speech. I first call up in my own brain a picture of a scene I wish to describe, and then, by means of an orderly transmission of wave vibrations set in motion by my vocal chords through the material atmosphere, a corresponding picture is implanted in the brain of anyone whose ear is capable of receiving such vibrations. If the scene I wish to impress on the brain of the recipient is of a complicated character, or if the picture of it in my own brain is not definite, the transmission will be more or less imperfect; but if I wish to get my audience to picture to themselves some very simple object, such as a triangle or a circle, the transmission of ideas will be well-nigh perfect, and equally clear to the brains of both transmitter and recipient. Here we use the vibrations of the material molecules of the atmosphere to transmit intelligence from one brain to another.

In the newly discovered Röntgen rays we are introduced to an order of vibrations of extremest minuteness as compared with the most minute waves with which we have hitherto been acquainted, and of dimensions comparable with the distances between the centers of the atoms of which the material universe is built up; and there is no reason to suppose that we have here reached the limit of frequency. Waves of this character cease to have many of the properties associated with light waves. They are produced in the

same ethereal medium, and are probably propagated with the same velocity as light, but here the similarity ends. They cannot be regularly reflected from polished surfaces; they have not been polarized; they are not refracted on passing from one medium to another of different density, and they penetrate considerable thicknesses of substances opaque to light with the same ease with which light passes through glass. It is also demonstrated that these rays, as generated in the vacuum tube, are not homogeneous, but consist of bundles of different wave-lengths, analogous to what would be differences of color could we see them as light. Some pass easily through flesh, but are partially arrested by bone, while others pass with almost equal facility through bone and flesh.

It seems to me that in these rays we may have a possible mode of transmitting intelligence which, with a few reasonable postulates, may supply a key to much that is obscure in psychical research. Let it be assumed that these rays, or rays even of higher frequency, can pass into the brain and act on some nervous center there. Let it be conceived that the brain contains a center which uses these rays as the vocal chords use sound vibrations (both being under the command of intelligence), and sends them out, with the velocity of light, to impinge on the receiving ganglion of another brain. In this way, some at least, of the phenomena of telepathy, and the transmission of intelligence from one sensitive to another through long distances, seem to come into the domain of law and can be grasped. A sensitive may be one who possesses the telepathic transmitting or receiving ganglion in an advanced state of development, or who, by constant practice, is rendered more sensitive to these high-frequency waves. Experience seems to show that the receiving and the transmitting ganglions are not equally developed; one may be active, while the

other, like the pineal eye in man, may be only vestigial. By such an hypothesis no physical laws are violated, neither is it necessary to invoke what is commonly called the supernatural.

To this hypothesis it may be objected that brain waves, like many other waves, must obey physical laws. Therefore, transmission of thought must be easier or more certain the nearer the agent and recipient are to each other, and should die out altogether before great distances are reached. Also it can be urged that if brain waves diffuse in all directions they should affect all sensitives within their radius of action, instead of impressing only one brain. The electric telegraph is not a parallel case, for there a material wire intervenes to conduct and guide the energy to its destination.

These are weighty objections, but not, I think, insurmountable. Far be it from me to say anything disrespectful of the law of inverse squares, but I have already endeavored to show we are dealing with conditions removed from our material and limited conceptions of space, matter, form. Is it inconceivable that intense thought concentrated toward a sensitive with whom the thinker is in close sympathy may induce a telepathic chain of brain waves, along which the message of thought can go straight to its goal without loss of energy due to distance? And is it also conceivable that our mundane ideas of space and distance may be superseded in these subtile regions of unsubstantial thought. where "near" and "far" may lose their usual meaning?

I repeat that this speculation is strictly provisional. I dare to suggest it. The time may come when it will be possible to submit it to experimental tests.

I am impelled to one further reflection, dealing with the conservation of energy. We say, with truth, that energy is transformed, but not destroyed, and that whenever we can trace the transformation we find it quantitatively exact. So

far as our very rough exactness goes, this is true for inorganic matter and for mechanical forces. But it is only inferentially true for organized matter and for vital forces. We cannot express life in terms of heat or of motion. And thus it happens that just when the exact transformation of energy will be most interesting to watch, we cannot really tell whether any fresh energy has been introduced into the system or not. Let us consider this a little more closely.

It has, of course, always been realized by physicists, and has been especially pointed out by Dr. Croll, that there is a wide difference between the production of motion and the direction of it into a particular channel. The production of motion, molar or molecular, is governed by physical laws, which it is the business of the philosopher to find out and correlate. The law of the conservation of energy overrides all laws, and it is a pre-eminent canon of scientific belief that for every act done a corresponding expenditure of energy must be transformed. No work can be effected without using up a corresponding value in energy of another kind. But to us the other side of the problem is even of more importance. Granted the existence of a certain kind of molecular motion, what is it that determines its direction along one path rather then another? A weight falls to the earth through a distance of 3 feet. I lift it, and let it fall once more. In these movements of the weight a certain amount of energy is expended in its rise and the same amount is liberated in its fall. But instead of letting the weight fall free, suppose I harness it to a complicated system of wheels, and, instead of letting the weight fall in the fraction of a second, I distribute its fall over twenty-four hours. No more energy is expended in raising the weight, and in its slow fall no more or less energy is developed than when it fell free; but I have made it do work of another kind. It now drives a clock, a telescope, or a philosophic

instrument, and does what we call useful work. The clock runs down. I lift the weight by exerting the proper amount of energy, and in this action the law of conservation of energy is strictly obeyed. But now I have the choice of either letting the weight fall free in a fraction of a second, or, constrained by the wheel-work, in twenty-four hours. I can do which I like, and whichever way I decide, no more energy is developed in the fall of the weight. I strike a match; I can use it to light a cigarette or to set fire to a house. I write a telegram; it may be simply to say I shall be late for dinner, or it may produce fluctuations on the stock exchange that will ruin thousands. In these cases the actual force required in striking the match or in writing the telegram is governed by the law or conservation of energy; but the vastly more momentous part, which determines the words I use or the material I ignite, is beyond such a law. It is probable that no expenditure of energy need be used in the determination of direction one way more than another. Intelligence and free will here come into play, and these mystic forces are outside the law of conservation of energy as understood by physicists.

The whole universe, as we see it, is the result of molecular movement. Molecular movements strictly obey the law of conservation of energy, but what we call "law" is simply an expression of the direction along which a form of energy acts, not the form of energy itself. We may explain molecular and molar motions, and discover all the physical laws of motion, but we shall be as far as ever from a solution of the vastly more important question as to what form of will and intellect is behind the motions of molecules, guiding and constraining them in definite directions along predetermined paths. What is the determining cause in the background? What combination of will and intellect outside our physical laws guides the fortuitous con-

course of atoms along ordered paths culminating in the material world in which we live?

In these last sentences I have intentionally used words of wide signification—have spoken of guidance along ordered paths. It is wisdom to be vague here, for we absolutely cannot say whether or when any diversion may be introduced into the existing system of earthly forces by an external power. We can no more be certain that this is not so than I can be certain, in an express train, that no signalman has pressed a handle to direct the train onto this or that line of rails. I may compute exactly how much coal is used per mile, so as to be able to say at any minute how many miles we have traveled, but, unless I actually see the points, I cannot tell whether they are shifted before the train passes.

An omnipotent being could rule the course of this world in such a way that none of us should discover the hidden springs of action. He need not make the sun stand still upon Gibeon. He could do all that he wanted by the expenditure of infinitesimal diverting force upon ultra-microscopic modifications of the human germ.

In this address I have not attempted to add any item to the sound knowledge which I believe our society is gradually amassing. I shall be content if I have helped to clear away some of those scientific stumbling-blocks, if I may so call them, which tend to prevent many of our possible coadjutors from adventuring themselves on the new illimitable road.

I see no good reason why any man of scientific mind should shut his eyes to our work or deliberately stand aloof from it. Our proceedings are, of course, not exactly parallel to the proceedings of a society dealing with a long-established branch of science. In every form of research there must be a beginning. We own to much that is tentative, much that may turn out erroneous. But it is thus, and thus

only, that each science in turn takes its stand. I venture to assert that both in actual careful record of new and important facts, and in suggestiveness, our society's work and publications will form no unworthy preface to a profounder science both of man, of nature, and of "worlds not realized" than this planet has yet known.

THE THEORY OF SERUM TREATMENT

BY ROBERT KOCH

[ROBERT KOCH, b. Hanover, Dec. 11, 1843; graduate of University of Göttingen, 1866. Asst. Surgeon Hospital at Hamburg; practiced medicine at Wollenstein where, in 1876, he began researches in bacteriology. In 1880 was chief of Sanitary Institute, Berlin, where he prosecuted his studies of Consumption and Cholera and discovered that these diseases are caused by a specific micro-organism. In 1883 published a method of preventive inoculation against anthrax, and in the same year he was sent by the German Government to Egypt and India to investigate the plague of Cholera, which resulted in his discovery of the Cholera Bacillus. In 1890 he announced his discovery of the Bacillus of Consumption.]

IN this summary I shall confine myself to the most obvious conclusions. It has indeed of late become too common to draw the most sweeping conclusions as to infective diseases in general from the most unimportant observations on bacteria. I shall not follow this custom, although the material at my command would furnish rich food for meditation. For the longer I study infective diseases the more am I convinced that generalisations of new facts are here a mistake, and that every individual infective disease or group of closely allied diseases must be investigated for itself.

As regards the artificial traumatic infective diseases observed by me, the conditions which must be established before their parasitic nature can be proved, we completely fulfilled in the case of the first five, but only partially in that of the sixth. For the infection was produced by such small quantities of fluid (blood, serum, pus, etc.,) that the result cannot be attributed to a merely chemical poison.

In the materials used for inoculation bacteria were without exception present, and in each disease a different and well marked form of organism could be demonstrated.

At the same time, the bodies of those animals which died of the artificial traumatic infective diseases contained bacteria in such numbers that the symptoms and the death of the animals were sufficiently explained. Further, the bacteria found were identical with those which were present in the fluid used for inoculation, and a definite form of organisms corresponded in every instance to a distinct disease.

These artificial traumatic infective diseases bear the greatest resemblance to human traumatic infective diseases, both as regards their origin from putrid substances, their course, and the result of post-mortem examinations. Further, in the first case, just as in the last, the parasitic organisms could be only imperfectly demonstrated by the earlier methods of investigation; not till an improved method of procedure was introduced was it possible to obtain complete proof that they were parasitic diseases. We are therefore justified in assuming that human traumatic infective diseases will in all probability be proved to be parasitic when investigated by these improved methods.

On the other hand, it follows from the fact that a definite pathogenic bacterium, e. g., the septicæmic bacillus, cannot be inoculated on every variety of animal (a similar fact is also true with regard to the bacillus anthracis); that the septicæmia of mice, rabbits, and man are not under all circumstances produced by the same bacterial form. It is of course possible that one or the other of the bacteric forms found in animals also play a part in such diseases in the human subject. That, however, must be especially demonstrated for each case; *a priori* one need only expect that bacteria are present; as regards form, size and conditions of growth, they may be similar, but not always the same, even in what appear to be similar diseases in different animals.

Besides the pathogenic bacteria already found in animals

there are no doubt many others. My experiments refer only to those diseases which ended fatally. Even these are in all probability not exhausted in the six forms mentioned. Further experiments on many different species of animals, with the most putrid substances and with every possible modification in the method of application, will doubtless bring to light a number of other infective diseases, which will lead to further conclusions regarding infective diseases and pathogenic bacteria.

But even in the small series of experiments which I was able to carry out, one fact was so prominent that I must regard it as constant, and, as it helps to remove most of the obstacles to the admission of the existence of a centagium vivum for traumatic infective diseases, I look on it as the most important result of my work. I refer to the differences which exist between pathogenic bacteria and to the constancy of their characters. A distinct bacteric form corresponds, as we have seen, to each disease, and this form always remains the same, however often the disease is transmitted from one animal to another. Further, when we succeed in reproducing the same disease *de novo* by the injection of putrid substances, only the same bacteric form occurs which was before found to be specific for that disease.

Further, the difference between these bacteria are as great as could be expected betwen particles which border on the invisible. With regard to these differences, I refer not only to the size and form of the bacteria, but also to the conditions of their growth, which can be best recognized by observing their situation and grouping. I therefore study not only the individual alone, but the whole group of bacteria, and would, for example, consider a micrococcus which in one species of animal occurred only in masses (i. e., in a zooglæa form), as different from another which in the same variety of animal, under the same conditions of

life, was only met with as isolated individuals. Attention must also be paid to the physiological effect, of which I scarcely know a more striking example than the case of the bacillus and the chain-like micrococcus growing together in the cellular tissue of the ear; the one passing into the blood and penetrating into the white blood corpuscles, the other spreading out slowly into the tissues in its vicinity and destroying everything around about; or again, the case of the septicæmic and pyæmic micrococci of the rabbit in their different relations to the blood; or lastly, the bacilli only extending over the surface of the aural cartilage in the erysipetalous disease, as contrasted with the bacillus anthracis, likewise inoculated on the rabbit's ear, but quickly passing into the blood.

As, however, there corresponds to each of the diseases investigated a form of bacterium distinctly characterized by its physiological action, by its condition of growth, size, and form, which, however often the disease be transmitted from one animal to another, always remains the same and never passes over into another form, e. g., from the spherical to the rod shaped, we must in the meantime regard these different forms of pathogenic bacteria as distinct and constant species.

This is, however, an assertion that will be much disputed by botanists, to whose special province this subject really belongs.

Amongst those botanists who have written against the subdivision of bacteria into species, is Nägeli, who says, "I have for ten years examined thousands of different forms of bacteria, and I have not yet seen any absolute necessity for dividing them even into two distinct species."

Brefeld also states that he can only admit the existence of specific forms justifying the formation of distinct species when the whole history of development has been traced by cultivation from spore to spore in the most nutritive fluids.

Although Brefeld's demand is undoubtedly theoretically correct, it cannot be made a *sine qua non* in every investigation on pathogenic bacteria. We should otherwise be compelled to cease our investigations into the etiology of infective diseases till botanists have succeeded in finding out the different species of bacteria by cultivation and development from spore to spore. It might then very easily happen that the endless trouble of pure cultivation would be expended on some form of bacterium which would finally turn out to be scarcely worthy of attention. In practice only the opposite method can work. In the first place certain peculiarities of a particular form of bacterium different from those of other forms, and in the second place its constancy, compel us to separate it from others less known and less interesting, and provisionally to regard it as a species. And now, to verify this provisional supposition, the cultivation from spore to spore may be undertaken. If this succeeds under conditions which cut out all sources of fallacy, and if it furnishes a result corresponding to that obtained by the previous observations, then the conclusions which were drawn from these observations and which led to its being ranked as a distinct species must be regarded as valid.

On this, which as it seems to me is the only correct practical method, I take my stand, and, till the cultivation of bacteria from spore to spore shows that I am wrong, I shall look on pathogenic bacteria as consisting of different species.

In order, however, to show that I do not stand alone in this view, I shall here mention the opinion of some botanists who have already come to a similar conclusion.

Cohn states that, in spite of the fact that many dispute the necessity of separating bacteria into genera or species, he must nevertheless adhere to the method as yet followed

by him, and separate bacteria of a different form and fermenting power from each other, so long as complete proof of their identity is not given.

From his investigations on the effects of different temperatures and of desiccation on the development of bacterium termo, Eidam came to the conclusion that different forms of bacteria require different conditions of nutriment, and that they behave differently towards physical and chemical influences. He regards these facts as a further proof of the necessity of dividing organisms into distinct species.

I shall bring forward another reason to show the necessity of looking on the pathogenic bacteria which I have described as distinct species. The greatest stress, in investigations on bacteria, is justly laid on the so-called pure cultivations, in which only one definite form of bacterium is present. This evidently arises from the view that if, in a series of cultivations, the same form of bacterium is always obtained, a special significance must attach to this form: it must indeed be accepted as a constant form, or in a word as a species. Can then, a series of pure cultivations be carried out without admixture of other bacteria? It can in truth be done, but only under very limited conditions. Only such bacteria can be cultivated pure, with the aids at present at command, which can always be known to be pure, either by their size and easily recognizable form, as the bacillus anthracis, or by the production of a characistic coloring matter as the pigment bacteria. When, during a series of cultivations, a strange species of bacteria has by chance got in, as may occasionally happen under any circumstances, it will in these cases be at once observed, and the unsuccessful experiment will be thrown out of the series without the progress of the investigation being thereby necessarily interfered with.

But the case is quite different when attempts are made to

carry out cultivations of very small bacteria, which, perhaps, cannot be distinguished at all without staining; how are we then to discover the occurrence of contamination? It is impossible to do so, and therefore all attempts at pure cultivation in apparatus, however skillfully planned and executed, must, as soon as small bacteria with but little characteristic appearances are dealt with, be considered as subject to unavoidable sources of fallacy, and in themselves inconclusive.

But nevertheless a pure cultivation is possible, even in the case of the bacteria which are smallest and most difficult to recognise. This, however, is not conducted in cultivation apparatus, but in the animal body. My experiments demonstrate this. In all the cases of a distinct disease, e. g., of septicæmia of mice, only the small bacilli were present, and no other form of bacterium was ever found with it, unless in the case where that causing the tissue gangrene was intentionally inoculated at the same time. In fact, there exists no better cultivation apparatus for pathogenic bacteria than the animal body itself. Only a very limited number of bacteria can grow in the body, and the penetration of organisms into it is so difficult that the uninjured living body may be regarded as completely isolated with respect to other forms of bacteria than those intentionally introduced. It is quite evident, from a careful consideration of the two diseases produced in mice-septicæmia and gangrene of the tissue—that I have succeeded in my experiments in obtaining a pure cultivation. In the putrefying blood, which was the cause of these two diseases, the most different forms of bacteria were present, and yet only two of these found in the living mouse the conditions necessary for their existence. All the others died, and these two alone, a small bacillus and a chain-like micrococcus, remained and grew. These could be transferred from one

animal to another as often as was desired, without suffering any alteration in their characteristic form, in their specific physiological action and without any other variety of bacteria at any time appearing. And further, as I have demonstrated, it is quite in the power of the experimenter to separate these two forms of bacteria from each other. When the blood in which only the bacilli are present is used, these alone are transmitted, and thenceforth are obtained quite pure; while on the other hand, when a field mouse is inoculated with both forms of bacteria, the bacilli disappear, and the micrococcus can be then cultivated pure. Doubtless an attempt to unite these two forms again in the same animal by inoculation would have been successful. In short, one has it completely in one's power to cultivate several varieties of bacteria together, to separate them from each other, and eventually to combine them again. Greater demands can hardly be made on a pure cultivation, and I must therefore regard the successive transmission of artificial infective diseases as the best and surest method of pure cultivation. And it can further claim the same power of demonstrating the existence of specific forms of bacteria, as must be conceded to any faultless cultivation experiments.

From the fact that the animal body is such an excellent apparatus for pure cultivation, and that, as we have seen, when the experiments are properly arranged and sufficient optical aids used, only one specific form of bacterium can be found in each distinct case of artificial traumatic infective disease, we may now further conclude that when, in examining a traumatic infective disease, several different varieties of bacteria are found, as e. g., chains of small granules, rods, and long, oscillating threads—such as were seen together by Coze and Feltz in the artificial septicæmia of rabbits—we have to do either with a combined infective disease,—that is, not a pure one,—or, what in the case cited

is more probable, an inexact and inaccurate observation. When, therefore, several species of bacteria occur together in any morbid process, before definite conclusions are drawn as to the relations of the disease in question to the organisms, either proof must be furnished that they are all concerned in the morbid process, or an attempt must be made to isolate them and to obtain a true pure cultivation. Otherwise we cannot avoid the objection that the cultivation was not pure, and therefore not conclusive. I shall only briefly refer to a further necessary consequence of the admission of the existence of different species of pathogenic bacteria. The number of the species of these bacteria is limited; for, of the numerous diverse forms present in putrid fluids, one or but few can in the most favorable cases develop in the animal body. Those which disappear are, for that species of animal at least, not pathogenic bacteria. If, however, as follows from the foregoing, there exist hurtful and harmless bacteria, experiments performed on animals with the latter, e. g., with bacterium termo, prove absolutely nothing for or against the behavior of the former —the pathogenic—forms. But almost all the experiments of this nature have been carried out with the first mixture of different species of bacteria which came to hand without there being any certainty that pathogenic bacteria were in reality present in the mixture. It is therefore evident that none of these experiments can be regarded as furnishing evidence of any value for or against the parasitic nature of infective diseases.

In all my experiments, not only have the form and size of the bacteria been constant, but the greatest uniformity in their actions on the animal organisms has been observed, though no increase of virulence, as described by Coze and Feltz, Davaine, and others. This leads me to make some remarks on the supposed law of the increasing virulence of

blood when transmitted through successive animals, discovered or confirmed by the investigators just named.

The discovery of this law has, as is well known, been received with great enthusiasm, and it has excited no little interest owing to its intimate bearing on the doctrine of natural selection (Anpassung and Vererbung). Some investigators, who are in other things very exact, have allowed themselves to be blinded by the seductive theory that the insignficant action of a single putrefactive bacterium may, by continued natural selection in passing from animal to animal, be increased in virulence till it becomes deadly though a drop of the infective liquid be diluted in a quadrillion times. They have founded thereon the most beautiful practical applications, not suspecting that the bacteria in question have never been certainly demonstrated.

The original works of Coze and Feltz, as also that of Davaine, are not at my disposal for reference; and I cannot therefore enter into a complete criticism of them. So far, however, as I can gather from the references accessible to me, especially from the detailed notices in Virchow and Hirch's "Jahnesbericht," no complete proof that the virulence of septicæmic blood increases from generation to generation seems to have been furnished. Apparently blood more and more diluted was injected, and astonishment was felt when this always acted, the effect being then ascribed to its increasing virulence. But controlling experiments to ascertain whether the septicæmic blood were not already as virulent in the second and third generations as in the twenty-fifth, do not seem to have been made. My experiments so far support and are in accordance with those of Coze, Feltz, and Devaine in that for the first infection of an animal relatively large quantities of putrid fluid are necessary; but in the second generation, or at the latest in the third, the full virulence was attained, and afterwards remained constant.

Of my artificial infective diseases the septicæmia of the mouse has the greatest correspondence with the artificial septicæmia described by Davaine. If we were to experiment with this disease in the same manner as Davaine experimented, we would, if no controlling experiments were employed, find the same increase in virulence of the disease. It would only be necessary to use blood in slowly decreasing quantities in order to obtain in this way any progressive increase of the virulence that might be desired. I, however, took from the second or third animal the smallest possible quantity of material for inoculation, and thus arrived more quickly at the greatest degree of virulence. Till, therefore, I am assured that, in the septicæmia observed by Davaine, such controlling experiments were made, I can only look on an increase in virulence as holding good for the earlier generations. In order to explain this we do not, however, require to have recourse to the magical wand of natural selection; a feasible explanation can be very naturally furnished. Let us take again the septicæmia of mice, as being the most suitable example.

If two drops of putrefying blood be injected into such an animal there is introduced not only a number of totally distinct species of bacteria, but also a certain amount of dissolved putrid poison (sepsin), not sufficient to produce a fatal effect, but yet certainly not without influence on the health of the animal. Different factors must therefore be considered as affecting the health of the animal. On the one hand there is the dissolved poison, on the other the different species of bacteria, of which, however, perhaps only two, as in the example before us, can multiply in the body of the mouse and there exert a continuous noxious influence. Only one of these two species can penetrate into the blood, and if the blood alone be used for further inoculations, only this one variety will come victorious out of the

battle for existence. The further development of the experiment depends entirely on the quantity of the putrid poison, and on the relation of the two forms of bacteria to each other in point of numbers. If one injects a large amount of septic poison and a large number of that variety of bacteria which increases locality (in this case the chain-like micrococci causing the gangrene of the tissue), but only a very small number of the bacteria which pass into the blood (here the bacilli), the first animal experimented on will die, as a result of the preponderation influence of the first two factors before many bacilli can have got into the blood and multiplied there. Of the blood of this first animal, containing, as it does, proportionately very few bacilli, one-fifth to one-tenth of a drop must be inoculated in order to convey the disease with certainty. In the second animal, however, only the bacilli are introduced, and these develop undisturbed in the blood. For the infection of the third animal the smallest quantity of this blood which can produce an effect is then sufficient, and after this third generation the virulence of the blood remains uniform.

We may also imagine another case in which the increase of the virulence may go on through more than two generations without any modification resulting from natural selection and transmission from animal to animal. This would take place if several species of bacteria capable of passing into the blood were introduced into the animal at the first injection. Let us suppose, for example, that in the same putrefying blood which served for the foregoing experiment, the bacilli of anthrax were also present, there would then be contained in the blood of the first animal not only the septicæmic bacillus, but also bacillus anthracis, and of each only a small number; of the anthrax bacillus there would be even fewer than of the other, because in mice they are deposited chiefly in the spleen, lungs, etc.; while in the blood of the

heart they are, even in the most favorable cases, only sparsely distributed. On the other hand, the anthrax bacilli have this advantage, that, provided they be inoculated in considerable numbers, they kill even within twenty hours, while the septicæmic bacilli only destroy life after fifty hours. In the blood of the second animal, therefore, both species of bacilli would be present in larger numbers than in the first, although not yet so numerous as if either organism had been inoculated singly. Hence a larger quantity of blood is necessary to ensure transmission to a third animal. Perhaps this might be the case even in the fourth generation, till finally one or other variety of bacillus would alone be present in the blood injected. Probably this would be the septicæmic bacillus.

In this way the experiments of Coze, Feltz, and Davaine may admit of simple explanation and be brought into harmony with my results.

CHRISTIAN SCIENCE: ITS HEALING MINISTRY

BY BLISS KNAPP

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If Christian Science were simply an intellectual pastime, touching only the emotions and sentiments of men, it could never emulate the mercy of primitive Christian healing. On the contrary, it appeals to their highest moral and spiritual nature, and leads them to find in God a sure reward for trusting in Him. It is a prophet of good tidings, promising deliverance from pain, suffering and disease; and by the accomplishment of this deliverance, its truth has been established. It has challenged attention, not because of any failure, but because of its success in good works. Indeed its most uncompromising critics are now ready to admit that Christian Science has made good its claim to be a healing religion.

Possibly the larger part of song and of verse has been inspired by the tragedy of life. The mystery of suffering has compelled even the most frivolous to seek the meaning of life; and it is the theology of Christian Science that not only clears this mystery, but removes the suffering. If the healing seems to be of more consequence than the religion, in its appeal to the stranger, it is because he has not looked beyond the cure to its spiritual cause, for it is the theology of Christian Science which heals the sick and reforms the sinner. Far from being an ethical philosophy, Christian Science is a life to be lived,—a truth to be proved.

In looking over the entire range of religious beliefs, whether handed down by tradition or recorded in the sacred books, it is interesting to note that they all claim to be the promulgation of revealed truth; but whatever may be the nature or quality of such truth, that which differentiates the demonstrable revelation of Jesus Christ from them all is its power to give health and life, for "I am come," said Jesus, "that they might have life, and that they might have it more abundantly." Moreover, that truth which heals and reforms, manifests the only religion that is susceptible of proof; for the Master's healing, resurrection and final ascension demonstrated this life-giving element in Christianity.

The works of healing which Jesus accomplished have been preached for centuries; but for one to relate the simple story, of how he went to the mother of Peter's wife and healed her of a fever, does not adequately explain how the healing was accomplished. Suppose one were to repeat the simple words of Jesus and imitate his manner of addressing disease, the mere form could never reveal the effective power which he employed, nor could it give the process so that another might repeat the operation. At least we might infer this from the fact that these works have not been more commonly done for many centuries. That which has made Christian Science eminently practical is its ability to define not only the power which Christ Jesus employed, but the rule by which another may repeat his works; and this withal in so simple a manner that even a child can understand and enjoy its protection; indeed its understanding is a panacea for everybody and at all times, whether the difficulty be a sick body or a sick mind, for "He that believeth in me," said Jesus, "the works that I do shall he do also; and greater works than these shall he do; because I go unto my Father."

Footsteps in Spiritual Discovery

When Jesus healed the centurion's servant and the Syrophenician's daughter without as much as going near them, it should be clear that the power employed was mental, as mental indeed as any Christian prayer. An English poet has propounded the query, "For to say truly, what else is man but his mind?" Indeed we might ask, What else is God but divine Mind? It is truly unthinkable to conceive of an all-wise, all-intelligent God apart from Mind. Moreover, how can an ever-present God be everywhere present, except that presence is Mind? The words of Paul, that "to be carnally minded is death; but to be spiritually minded is life and peace," express the fact that the healing power is in the divine Mind,—in Spirit, not in matter.

To explain how the Mind that is God should have become available for our needs may seem as impossible as to determine the character of the distant stars. But as God's messenger's have come down to us from former generations pointing the way, it may be interesting to contemplate the manner by which these early prophets came to understand for themselves this healing power of God, that we may emulate their good works. The first of the old patriarchs, although reared in the school of idolatry, was touched by a divine impulse and began to contemplate a diviner sense of authority; he began to recognize that, instead of many powers manifested in so many different idols, there is really but one Mind or intelligence, whose power governs the universe and man; the same power, in fact, which later divided the waters of the Red Sea and closed the lions' mouths. Abraham's unswerving devotion to this guiding and saving power inspired an absolute faith in its omnipotence. His recognition of this supreme power revealed God to Abraham as "the Almighty;" and yet, although Abraham

had absolute faith in this saving power and in its promises, his concept of it must have been limited, for the voice of God said unto Moses, "I appeared unto Abraham, unto Isaac, and unto Jacob, by the name of God Almighty, but by my name JEHOVAH was I not known to them," indicating that there was more to learn about the application of this Mind to human needs.

Moses was taught from his youth to believe in God, but when he began to comprehend what he once believed, he discovered at the outset the same power which inspired the faith of Abraham. Moses was a great observer, and he began to note that this power is not confined to isolated places, like so many nuggets which might be discovered at random, nor is it restricted to holy places or occasions, for he perceived the great fact that this divine power operates through well-defined laws, emanating from the one Principle or Mind, and that as ever-present law this power has a healing and saving influence. Indeed this power manifested through law brought the actual proofs of deliverance from the plagues, from the Red Sea, and from the terrors of the wilderness, until its reliability and truth were absolutely established. Hence, we have in the Scriptures not only Abraham's recognition of God as the Almighty, but the Mosaic declaration that He is "a God of truth and without iniquity, just and right is he;" and the psalmist adds, "Thy law is the truth." This, then, is the basis for Jesus' declaration, "Ye shall know the truth, and the truth shall make you free." Nevertheless, when these people had the law, and lived the law, and were delivered by the law, there was yet one thing needful. The final revelation which fulfils the law had not yet been received, for they were continually looking for Immanuel or "God with us."

The Jews had been looking for Immanuel; they needed a final revelation, and expected one. This final interpretation

was to bring the very presence of God to their understanding; and when Christ Jesus took up the thread of this progressive revelation and carried it on to completion, an unbroken highway to the Father's kingdom was established on earth. Christ Jesus' vindication was in his works, for he said, "Though ye believe not me, believe the works." Indeed these works of healing and reformation were precisely what Moses and the prophets had foretold. If the mission of Christ Jesus is to point "the way" by manifesting the works of healing, then the intelligence or spiritual understanding which removes the scales of sin and disease in every age must be the same,—Christ, Truth,—for Jesus himself declared, "No man cometh unto the Father, but by me;" that is, by apprehending that divine Truth which brought about the healing.

Now the Scriptures imply that what the Israelites lacked was the Christian teaching that "God is Love," for "he that loveth not knoweth not God; for God is Love." Moreover, Paul declared that "Love is the fulfilling of the law." Thus we learn that divine Love is the benign presence that heals the sick, reforms the sinner, and fulfills the law.

Scientific Discovery

I have briefly presented this idea of divine law, fulfilled in Love, by way of anticipating the frequent remark that Christian Science is neither Christian nor scientific. What does it mean to have a science? You well know that a science implies classified knowledge; it is the presentation of a law in its unity, order, and system, and this is precisely what Christian Science does. It presents divine law in its unity, order, and system, with such precision and accuracy that Christian healing prevails by way of proof. It is therefore eminently scientific; moreover, it is Christian because

this law is not physical, but spiritual, divine, compassionate, and helpful.

Every one would like to have the power to do the good that Jesus did; every one would be glad to understand the divine law well enough to heal and reform men as did the primitive Christians; and when one does understand this law in its spiritual sense, he is a Christian Scientist as truly as one who understands the mathematical law is a mathematical scientist.

The ability to do the works of Jesus was lost through the idolatry and materialism of the dark ages, and no further discovery in spiritual progress could be made until the rediscovery of primitive Christian healing. Before Jesus went away he had promised to send another Comforter, who should guide into all truth. Therefore Christendom has been looking for the appearing of this Comforter even as the Jews have been looking for Immanuel; but as Jesus pointed to the works of healing as the only proof that Immanuel, or the understanding of God, had come, so he declared this healing Comforter to be not a man, but the "Spirit of Truth," which shall guide into all truth, even that truth which to know is freedom from all fear, sin and disease. When Mrs. Eddy re-discovered primitive Christian healing, she made the further great discovery of its Science and called it Christian Science. She presented the spirit and power of divine law with such precision and accuracy, that it is indeed the "Spirit of Truth," or Comforter, which opens the way to all truth by revealing the practical Science of Christian healing, so that all may follow in the way of Christ Jesus. With this discovery came also the recognition that a divine Science must have a divine Principle. Consequently Mrs. Eddy has presented the further discovery, that God is divine Principle, governing the universe and man through the eternal laws of truth.

Spiritual Activity

When a man is suffering a burden of disease, he wants to know respecting the practical application of this law to his needs—how it is that he may have the assurance that God is indeed "a very present help in trouble." Now, a student never prays to have his problem in mathematics work itself out, for this would do away with the necessity of understanding. He has the problem and also the rule, and he must act in obedience to the rule. There must be a mental activity on his part; and when that activity obeys the mathematical rule the correct solution is inevitable. In Christian Science we have divine law, and when we are confronted by the problems of sin and disease, our next important step is to act, or demonstrate this law. The activity which gives to it a healing effect is the energy of eternal Spirit.

The prophet Zachariah voiced this Christian idea when he said, "Not by might, nor by power, but by my spirit, saith the Lord." For "the hour cometh," said Jesus, "and now is, when the true worshipers shall worship the Father in spirit and in truth." Therefore when this spiritual sense, by which we worship God, is guided by the divine law—that is, scientifically—Christian healing is inevitable. It is truly significant that Jesus opened his mission with Isaiah's prophetic words, "The spirit of the Lord is upon me." From that moment he began to solve these problems through the destruction of sin and disease. He healed the sick, cleansed the lepers, raised the dead, cast out devils. Moreover he declared (according to the Revised Version) that "God is Spirit."

God is Principle

It is to be noted that although Christian Science presents no new God, it does present several Scriptural names for

Deity. This does not mean so many different gods, these are but human terms, used to define the one God according to His several offices. That is, Truth is the law; Love fulfills the law; Spirit demonstrates the Science of the law, and so forth. To illustrate: Let us suppose we have a six-sided room, with each side a mirror, and a lamp placed in the center of the room. Each mirror will present a perfect reflection of the lamp, which will be similar each to the others. And yet, their office differs, for the reason that it is the office of one to image or define the north side, for another to image or define the south side, and so on, all being required to image or define the complete object. In like manner these synonymous terms for Deity are necessary to present the complete nature and being of God, whereby we have the Scriptural definition that God is all Mind, Spirit, Soul, Life, Truth, Love. Though differing in their office, we recognize that they are really identical in their essence, for divine Love is indeed the Mind and Spirit which is God.

It is evident, therefore, that Christian Science teaches no new God, but it does present a new name which includes these synonymous terms for Deity, and that new name is Principle. It is quite impossible to conceive of a divine law without a Principle to govern that law, and therefore Christian Science teaches that God is divine Principle. This may be seen in the relation of principle to rule as presented by the Century Dictionary. "You can make a rule; you cannot make a principle; you can lay down a rule; you cannot, properly speaking, lay down a principle. It is (already) laid down for you. You can establish a rule; you cannot, properly speaking, establish a principle. You can only declare it." If this word Principle implies any of the harshness of the Mosaic law with its "Thou shalt," and "thou shalt not," we must remember that the divine

Principle manifests all wisdom, intelligence, and goodness. Indeed, it includes the all of divine Love which binds up the broken-hearted and sets the captive free.

Method in Jesus' Teaching

Recognizing how essential it is, at some time, for all to claim their God-given right to be free, it may be interesting to observe the method which Jesus adopted in teaching this healing power to his disciples. Not being gifted in learning, these disciples manifested an average intelligence, and a certain familiarity with the Mosaic law. Doubtless they were as familiar with the Old Testament writings as is the average individual of today. However that may be, we read in Luke's Gospel that Jesus reproved them for their unbelief. "Then opened he their understanding, that they might understand the scriptures." One may be thoroughly familiar with the Scripture lessons, and in his unbelief fail to understand them. For example: When Jesus healed the man with the withered hand, all that he said was, "Stretch forth thine hand . . . . and it was restored whole, like as the other." We are all familiar with these words, but suppose that to-day these same words were repeated to one suffering from a withered hand, could their mere repetition heal him? It must be evident to all that not the words, but the spiritual understanding of the Master healed the sick. One might commit to memory the whole Bible, from Genesis to Revelation, and be unable to heal a single disease, for it is the spiritual understanding that needs to be opened. "The letter killeth," says the Scripture, "but the spirit giveth life."

To present this spiritual understanding, it was necessary for Jesus to begin on their plane of thought, where they could grasp the meaning of his teachings. He began with parables, and "without a parable spake he not unto them."

A little later he said, "I shall no more speak unto you in proverbs, but I shall show you plainly of the Father."

In this he did precisely what the mother does when she teaches her child that two and two make four. The child does not understand this at first for the reason that it is mental. He sees nothing but physical forms. Therefore the mother begins with something as tangible as red apples. They mean something directly, and he can understand that two red apples in one hand placed with two red apples in the other make four red apples. The mental character of the problem, however, has thus far escaped the child's notice. For his second lesson, the apples are removed, and he must learn by thinking red apples that two and two are four. Then for his third lesson, he is ready to grasp the mental problem without the physical forms.

In like manner Jesus taught the disciples first in parables, using the things of common experience which they could readily understand. Gradually in this way he turned their thoughts away from the physical to a more spiritual sense of things, until they began to apprehend a degree of reality in spiritual things. Indeed, their faith was strengthened by visible proofs of healing performed by their Master. To watch others solve these problems, however, was insufficient. For their second lesson, they were sent out in pairs to heal the sick, and thus prove their slight understanding; and behold they returned saying, "Even the devils are subject unto us through thy name." The great mental Principle which underlies all being and action was unfolding to them, and they grasped the spirit of it all by the actual demonstration of healing, so that Jesus could say as an opening to his third lesson, "I shall no more speak unto you in proverbs, but I shall show you plainly of the Father." That is, he could then teach them spiritual things in spiritual terms and they could understand spiritually. From that

time their healing was even more remarkable than before, in proof of their positive understanding of spiritual law.

Some there are who believe that the healing works of Jesus are not in obedience to a teachable law, averring that the disciples gained their understanding through the personal inspiration of the great Master. If this were true, what shall we say of Paul and the early Christians? Paul was not a personal disciple of Jesus, but he understood how to heal the sick and raise the dead. He was at first a persecutor of the Christians, actively engaged in opposing their teachings; but the moment he gained a spiritual sense of this Divine Principle, he gave to the world the proof of his understanding by the healing works. It was no longer unreasonable to him. He had learned that the carnal mind is no fit standard by which to judge the spiritual facts of being. For three hundred years this same Christian healing continued to be exercised by the Church.

Disease Mental

When one turns to God for comfort or consolation it is commonly through prayer. Christians are taught to pray for deliverance from sickness and from sin. They continue their preaching against sin, but through unbelief they are apathetic toward the Christian healing of sickness. The explanation may lie in the physical appearance of sickness, for if sickness were known to be as mental as sin, then it could be seen how a mental prayer could control both. If disease were purely physical and could be reached only by drugs or material means, there could be no such thing as Christian healing. One of the leading points in the theology of Christian Science, and one which physicians are now admitting to be true, is the mental nature of disease.

We should look beyond the physical effects to their mental cause, just as Moses did, for when he withdrew his hand

from his bosom white with leprosy he awoke to the mental nature of leprosy. Again, when he returned his hand to his bosom, in obedience to the word of God, and withdrew it free from that dread disease, he learned of its mental cure, and that the divine Mind is the healer. It follows therefore that Christian prayer should be just as efficacious in healing disease which is mental as in casting out the belief in mental sin.

Now when a dentist administers anesthetics to suspend or divert the thought during the process of an operation, he is proceeding on the assumption that if a man cannot think, he cannot be hurt; for during the time when the patient's thought is suspended or diverted, his flesh and bones can of themselves experience no pain nor sensation, no life nor intelligence. Consequently pain is all in the thinking. It is in the mortal mind and not the physical form. It follows therefore, that even surgery may prove indirectly the mental nature of disease.

This leads us to the point where we must recognize with Paul two types of mind, the false and the true, "for to be carnally minded," said Paul, "is death, but to be spiritually minded is life and peace." These may be differentiated by their fruits, for the fruits of the carnal mind are anger, hatred, revenge, jealousy, evil thinking and so forth, which qualities make for sin and death. These are continually at war with the fruits of the Spirit, for these are honesty, goodness, mercy, purity, righteousness, loving kindness and so forth, which qualities make for life and peace. Recognizing how specifically the individual's own thinking governs his body both in health and in disease, we may ask, "Which mind is governing you? Is it the carnal which results in sin and death? Or is it the spiritual which makes for life and peace?" It is this spiritual mind which Jesus opened to his disciples and which demonstrates the law in Christian

healing. It is this spiritual mind that purges the conscience of its carnal thoughts and beliefs and fulfills the law of life and salvation.

Human Mind Not Regenerative

The observation that disease is mental has aroused the frequent remark, "Well, if pain is all in the thinking, just think you are well and you will be so." Now the same ignorant belief that causes disease can never cure it; for, if thinking you are well is all that is necessary, and it could be so arranged at twelve o'clock to-night to have everybody think they are well, then all the pain and suffering of the world might be wiped out in a single night. But the most masterful logic of material philosophy can never convince a suffering man that his pain is not real, for the same carnal mind that produces disease can never destroy it. Only the spiritual Mind revealed by Christ Jesus can uncover sin and disease and destroy them, and that Mind which was in Christ Jesus has stood forth in bold relief throughout the Christian era as the panacea for the world's ills. Therefore, "let this mind be in you, which was also in Christ Jesus."

Christian Scientists do not go to the sick-bed with the heartless assertion, "Nothing ails you." Jesus had compassion for those who were bound. He never healed a man by ignoring his difficulties, but by recognizing in his bondage a problem which needed to be solved not by ignorant belief, but in obedience to divine law, for the spiritual understanding of this law exposes the nothingness of evil, which is dissolved before it like dew before the sun.

Jesus Eschewed Human Will

It is well to know that the supposed cause of disease obtains in the mortal mind, and that the understanding of the divine Mind will cure it; but human nature always finds

somebody who wants to climb up by some other way. Such people hold that spiritual-mindedness is fit only for weak women and children, but for the man with a belief in personal magnetism the exercise of human will seems more manly. This unchristian belief in human will has been seized upon as a ready method for competing with Christian Science in casting out disease by a mental process. Various names have been used to designate these efforts, such as suggestive therapeutics, psychotherapeutics, or Christian psychology. These are admitted to be the operation of the human will or carnal mind, and they may be used by a wicked man, an infidel, or a pagan, and therefore they must be the polar opposites of the Mind of Christ, for "the carnal mind is enmity against God."

Human will is an animal propensity which tries to dominate everything and seeks to exploit itself as some great thing, but if "the light that is in thee be darkness, how great is that darkness." This blind belief in animal will would commit murder and do all manner of evil to satisfy its own desires. Its chief characteristics are lust and selfishness. As an educational system, its more hidden use is exploited in hypnotism and mesmerism, which are specifically defined as animal magnetism. Think you that this fable monger of materialism is the panacea for the world's ills?

Christ Jesus completely eschewed any use of the carnal will, well knowing that it possesses none of the joy and strength of divine Love, which regenerates both mind and body. Indeed, he understood the powerlessness of human will, for he said, "I can of mine own self do nothing. . . . because I seek not mine own will, but the will of the Father which hath sent me. If I bear witness of myself, my witness is not true."

Paul declared that the unrighteous mammon "changed the truth of God into a lie, and worshiped and served the creature more than the Creator." Therefore the basis of all

evil, animality, and disease is a lie; without mind, intelligence, or power. Hence, too, any use of this animal will or therapeutic suggestion is a lie about God, or Truth. This carnal mind being a lie, or nothing, no one can ever explain it as something. "Who can understand his errors?" asks the psalmist. Truth, on the other hand, can always be understood, and the understanding of Truth casts out error as dew before the sun. We are learning in Christian Science to recover man's divine inheritance of dominion over all sickness and sin, and in consequence we are learning to experience more of the joy of that blessed freedom from error by the understanding of Truth.

Cause and Effect

We may read from the book of Hebrews how that the figure of the law never made the chosen people perfect, rather did it continually remind them of their sins, in view of which they made sacrifice year after year, and for the same sins. But Christ Jesus, manifesting the eternal spirit of the law, purged their conscience once for all, and once purged they had no more consciousness of those sins, either in mind or in body. The apostle Paul has portrayed this as the true healing. Instead of continually doctoring effects, Christ Jesus dealt with the mental causes, and when he purged the conscience of sin, it also freed the body of disease, indicating a positive relation between sickness and sin. "For whether is easier, to say, Thy sins be forgiven thee; or to say, Arise, and walk." Thus it is that Christian Science heals both physically and morally.

There are many who really believe that God visits sickness and death upon humanity. It would startle many to learn of the large number of excellent people who are driven annually into infidelity by the cold and cruel assertion that God takes our loved ones away from us. Christian Science

wins these good people back to the Father's kingdom by proving that divine Love never afflicted a man with suffering and disease. When Jesus healed the lunatic child he did not rebuke the angels of God, in the belief that God had inflicted the disease, but he "rebuked the devil; and he departed out of him; and the child was cured from that very hour." He referred to a poor crippled woman as "a daughter of Abraham, whom Satan hath bound, lo, these eighteen years," and he healed her by casting out the sinful cause.

The mission of Christ Jesus was to "destroy the works of the devil." He regarded both sin and sickness as belonging to that which he proceeded to destroy with Truth and Love. His sense of devil was not a something with hoofs and horns, but the carnal mind which is enmity against God. The sick man by reason of his sickness may not be half so sinful as the well man. This is indicated by Christ Jesus' words when he said, "Those eighteen, upon whom the tower in Siloam fell, and slew them, think ye that they were sinners above all men that dwelt in Jerusalem? I tell you, Nay: but, except ye repent, ye shall all likewise perish." And from what should we repent, if not the carnal mind with its train of materialism, that we may "hold fast that which is good?"

So good a man as Job regarded his sickness as the buffetings of Satan and not of God; and he sought his release through a better understanding, not of his disease, but of the power of God,—the truth that makes free. He was exhorted to acquaint himself with God and be at peace, and finally he cried out, "I have heard of thee by the hearing of the ear; but now mine eye seeth thee," and he was healed.

Mrs. Eddy's Discovery

Before Mrs. Eddy discovered Christian Science, she had been searching for years along this line of mental causation.

She had been studying homeopathy, had learned the mental nature of disease, and that the higher attenuations of medicine which contained the least of the drug and the most of mind were the most powerful. She continued her investigations beyond homeopathy to a mental standpoint, with the question ever before her whether matter or mind heals the sick.

In her subsequent investigations of mental influences she learned that the carnal will or magnetic healing was absolutely opposed to her own ideals of mental healing as practiced by inspired Christians, and she turned from it. She possessed a spiritual insight that others failed to appreciate. Surely God was even then guiding her up to the right understanding of primitive Christian healing. Indeed she submitted to all manner of stress and trial, but withal proving a special fitness to receive the revelation of Truth, by clinging so naturally to her ideal of right and forsaking the counterfeit.

It was at this period of her experience that the great spiritual light dawned upon her consciousness, and found her waiting and prepared to receive the message. The circumstance which brought this spiritual awakening, and thereby established her conclusions, was her remarkable recovery, in the year 1866, from an injury caused by an accident. She was seeking to console her suffering sense by reading passages from the Scriptures, when she caught the depth of its spiritual import and was instantly healed. This was the vindication of her long search, for it was the Spirit that quickened and she knew it.

Now that Mrs. Eddy had found the Comforter, which is the "Spirit of truth," and which heals the sick, she resumed her search of the Scriptures for a scientific explanation of it, that she might impart it to others. She soon learned that the healing it effected according to a divine law, and she

began to write out her observations. These writings formed the basis of her more complete work, known as "Science and Health with Key to the Scriptures," which was first published in 1875.

The Text-Book

This wonderful treatise on Christian Science presents so accurate an exposition of its Science that thousands of people have been cured of all forms of chronic and acute diseases by its simple reading, in fulfillment of the Scripture, "'Ye shall know the truth, and the truth shall make you free." Mrs. Eddy has religiously excluded any mere opinion on the subject, confining herself strictly to a declaration of the facts as they exist. For this reason it cannot be the human opinion of a woman, for no one can either make or change the law. The facts of the divine law have been presented with such precision and grace that all may read, and understand, and be free. Indeed the last chapter in this book Science and Health, known as the chapter on Fruitage, contains a hundred pages of testimonials in evidence and proof of the fact that its study has healed all manner of sin, sickness, disease, and infidelity. Surely, by such works of redemption, Mrs. Eddy has become the greatest benefactor to suffering humanity since the time of the great master Christian.

There are some, however, who have found it difficult to grasp the author's meaning in their study of the Christian Science text-book. Indeed there are some intelligent people who have confessed to this difficulty. On the other hand, little children have been known to gain a sufficient understanding of its teachings to heal themselves and others. The seeming obscurity to the riper intellect is occasioned by a wrong method of approach. When one approaches the study of Christian Science from as material a view-point as

he would the study of physiology, he fails. As one has to think mathematically to learn mathematics, so must he think spiritually to understand Christian healing.

The Master said, "Except ye be converted, and become as little children, ye shall not enter into the kingdom of heaven." We discover therefore certain needful childlike qualities which lead to an understanding of Christian healing. There are humility, spiritual receptivity, and teachableness—three simple qualities, yet so essential that, if lost, they must be regained before one can reach the verities of Spirit.

Conclusion

Whatever else may be said about her, this fact should portray the true character of the Discoverer and Founder of Christian Science; for these childlike qualities must have characterized her attitude of thought in order for her to apprehend and accurately express this "Spirit of truth" or divine Comforter. Indeed she is a true friend to all lovers of Truth. She has presented the true meaning of liberty, and thereby won the boundless gratitude of humanity.

How clear it is that a book indicates the quality or character of the author's mind. We can know the mind of Shakespeare to-day by reading his books. We can discern the kind of man, whether he was good or evil, by his writings. In like manner the purity of Mrs. Eddy's thought is clearly portrayed by her writings, for she is a faithful disciple of her own teachings. To understand the works is to understand the author, and it follows that to understand the author is to understand the works. This is why Jesus said, "There is no man which shall do a miracle in my name, that can lightly speak evil of me," and it follows just as truly that no one can lightly speak evil of the author of Science and Health and understand its teachings. Paul had to

change his thought concerning the early Christians and their teachings, and his advance in understanding was coincident with this change. It should be thought a reasonable thing in a Christian land for the teachings of our Master and Wayshower to be fulfilled. Christian Science has penetrated the mystery of his words and works; and in all that we do we are asked simply to observe Mrs. Eddy's enjoinment, "Follow your Leader only so far as she follows Christ."

PSYCHOTHERAPY.

BY ROBERT MACDONALD

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PSYCHOTHERAPY may be defined as "the preservation of health and the cure of disease through mental, moral and spiritual methods." While Dr. Richard Cabot of the Harvard Medical School and the Massachusetts General Hospital speaks thus, Professor Munsterberg of the same University defines psychotherapy as "the preservation of health and the cure of disease through mental means." Neither definition is intended to mean that psychotherapy is to be hailed as a modern cure-all. In fact, only a certain type of disease—namely, that recognized by the physician as functional, is psychotherapy's field of operation. Organic diseases—those signifying destruction of some one, in whole or part, of the bodily organs, or of the body's tissue, are legitimate problems for surgeon and medical practitioner to solve. Such are cancer, tumor; diseases of kidneys, liver, intestines and lungs; valvular heart trouble, consumption and many other diseases that make deadly inroads upon the physical parts. But when the organs are working unsatisfactorily—functioning in perverted manner, as is often expressed in indigestion, palpitation, constipation and numerous nervous disorders arising from deranged functioning, but presenting no trace of degeneration or inflammation destructive of the organs' parts, then psychotherapy is enabled to exert beneficent results.

It should not be inferred from this general definition, that all disorders of the nervous system are curable by mental therapeutic measures. All nervous conditions are not resultants of psychic causes, notwithstanding Professor Dubois' general proposition that nervousness is a disease pre-eminently phychic, and a psychic disease needs psychic treatment.[1] But there are organic as well as functional neuroses to be reckoned with. And when there is a change induced in the form and structure of the elements and organs of the nervous system, the neurosis seldom, if ever, yields to psychic treatment. "Such are those psychoneurotics who have," according to Dubois, "in the organization of their brains, certain diseased conditions which render the patient absolutely refractory to all psychotherapeutic action." There are, he further maintains, neurasthenic and hysterical patients who remain incurable in spite of every effort which they try to make to modify their mental state; melancholia and hypochondria often occur without any perceptible moral cause under the sole influence of troubles whose nature is unknown.[2] Then, of course, there are the psychoneuroses, that are of somatic origin, in which the central functions are disturbed by internal causes of which we are generally ignorant, save in well defined cases of corporal disease. Whether of the known or unknown constitutional causes, the remedial effects of psychotherapy are highly problematical. Real melancholia, for instance, does not yield to psychical treatment; but there is a variety of melancholic cases, marked with morbid self-consciousness and acute mental depression that express themselves in weakness of will and a brooding sadness, in spite of what should be happiest surroundings, leading to joyous activity; even those that in their gloom contemplate suicide and unless remedied would

[1] Dubois, "Phychic Treatment of Nervous Diseases."
[2] Dubois, "Ibid," p. 448.

burst forth in desperate deed. These, because they are of psychogenic origin, can be remedied—even cured—by psychotherapeutics.

What may be remedially expected of these melancholic conditions can be realized, more or less fully, in all functional neuroses. There is that most wide-spread and least-specialized malady neurasthenia, springing from over-strained and over-stimulated conditions of the nervous system. At first, it is nothing more serious than that depression, or nervous tension, or sense of irritating exhaustion, expressed from the earliest times in the general term "nervousness." But the strain upon the nerves, if not lifted, becomes acute, expressing itself in general physical debility, which can be detected in any one or all of the following physical ills: dyspepsia, which is perhaps neurasthenia's most common expression, constipation, insomnia, noises in the head and ears, brain fag, defective memory, pains in head, back and limbs, loss of appetite and flesh, palpitation of the heart and anaemia. Dubois goes as far as to say that ninety per cent of dyspeptics are psychoneurotics.[1] Every part of the human anatomy may be weakened and all the normal powers become unresisting to the moral shock, when mental anxiety, worry, and fear are likely to accompany the instability and exhaustion. Neurasthenia is then a much more serious malady than nerve weakness, though it may have its inception in that negative neurosis. Each of its many varieties shows positive and aggravating content. For example, cerebral neurasthenia, spinal neurasthenia, cardiac neurasthenia, visceral neurasthenia and sexual neurasthenia, all express themselves in aggravated physiological disturbances. But all skilled neurologists are united upon the remedial powers of psychotherapy for neurasthenia. Sir John Forbes mentions these psychic powers of cure—augmented

[1] Dubois, "Psychic Treatment of Nervous Disorders," p. 258.

hope, faith, cheerfulness, mental activity, decreased anxiety, new motives for mental action and physical experience, soothing moral and religious sensibility. Dr. Schofield[1] states that mental therapeutics may calm the mind in excitement, arouse emotions of joy, hope and love, induce regular mental work to direct the thoughts from the malady. Schofield goes so far as to state that the force of mind is a therapeutic agent in every disease.

Though Hysteria assumes a great variety of organic forms, in fact, there being no disease of the nervous system that it may not counterfeit, such as insensibility in parts of the body, paralysis of the leg or arm, difficulty in breathing, pains in the heart, stomach or intestines, it is, nevertheless, a purely mental disease like all other psychoneuroses, even though Boris Sidis[2] states that definition to be as inadequate as it is to define man as a two-legged animal. Sidis defines hysteria as a malady of emotional life, an intensification of reproduced emotion brought about by the abnormal intensity of the associated ideo-sensory processes. Dubois[3] says it is the superior ego that is weak and which thus permits the polygon a semblance of autonomy. "Thus," continues Dubois, "the remedial appeal must be made to that ego in its highest individual sense, by making their minds critical and giving them a conscious sense of their independence." Dr. Rennie,[4] in the British Medical Journal, says "Hysteria is not an imaginary disease, caused, as generally supposed, by shamming. It is a true functional disturbance, but not of the conscious mind; therefore not intentional with the patient." Bernheim[5] sees the source of hysteria to be the psychic centres, but unconscious. Professor Biener[6] says

[1] Schofield, "The Force of Mind," pp. 209-211.
[2] Boris Sidis, Multiple Personality," pp. 347-349.
[3] Dubois, p. 221.
[4] Dr. Rennie, "British Medical Journal," May 4th, 1901.
[5] Prof. Bernstein, "Brain," XVI. 190.
[6] Prof. Biener (Vienna) "Neurologistes Centralblatt," January, 1893.

it is produced by the sundering of consciousness, the condition precedent to hysteria being in the existence of hypnoid states. Charcot and Sir R. Reynolds say it is ideogenic—which ideas are unconscious. Janet says it arises from psychic failure to grasp or attend to sensation, the impressions not arising above the lower sphere tending to foster, at the expense of consciousness, a secondary subconscious mental state. This noted authority sees hysteria to be a purely emotional disturbance, thus agreeing with Briquet. But Janet also sees, with Sollier, that it is a neurotic disturbance due to an excess of sleep. No less would he give credence to the theory of Féré, that it arises from excessive fatigue. "All these," continues Janet,—"emotion, sleep, fatigue—are at bottom precisely the same thing, inducing the same feelings of weakness, of powerlessness, of automatism, and expressing itself in the same intensely exaggerated agitations as are to be found in convulsions, spasms, curious hallucinations, and all ideas which develop automatically, as the result of suggestion. All such results are a narrowing of the field of consciousness to the intense occupation of the abnormality occupying it, which results in paralysis of will and obliteration of all those sensations and ideas which, in a normal mental state fuses, regulates and controls the impressions coming in from without, that would counteract the suggested idea. Dr. Morton Prince sees hysteria to be not only a mental disease, but includes a splitting of the personality, with or without a doubling of consciousness, also including automatism. All these authorities seem to agree with the theory of Frederick Myers, who stated squarely that hysteria was a disease of the subconscious mind. Hysteria is, therefore, especially amenable to suggestion, inasmuch as its phenomena are produced by morbid auto suggestion stronger than the normal consciousness. Suggestion may, however, depend upon the hypnotic state to be suc-

cessful, for the patient is ever keenly absorbed in his own moods and sensations, and more interested in and reliant upon his own morbid suggestions, than in your rational ones.

Another form of nervous trouble is psychasthenia, so called because the psychical element is primary rather than secondary, as though dependent upon various functional disturbances. Dubois[1] calls the mental peculiarities in psychasthenia "stigmota," by reason of their constancy. The mental defect being primary and dominant, gives rise through mental representations and autosuggestions to numerous functional disorders which the sufferer constantly dwells upon and aggravates. The psychoneuroses are more likely to be congenital than not. Their most apparent characteristic is volitional weakness, while the patient's mental predisposition is characterized by over-scrupulousness, illogicalness, lack of judgment, hasty and erroneous conclusions and often a condition too perplexed to reach any conclusion at all. Hours are sometimes spent in splitting hairs about the right and wrong of a word or act. As one said to me a while ago, "I question some days my every act, and though my reason approves, my conscience will not let me rest until I do it over again, and even then, I doubt if I have done it right. This indecision and worry are killing me; at times I fear I am going insane."

I recall a physician who consulted me about his psychasthenic condition. Over-scrupulousness was his malady. It had led to such emphatic self-distrust as to force him to give up his practice, and for three years he had not even permitted his modest doctor's sign upon the door of his office, lest he be giving the public a false hope of a remedy he felt he could not produce. His sense of incompetence affected his commonest speech, and much of his time was spent in

[1] Dubois, p. 157.

seeking out persons to whom he had talked the day before, that he might correct his statement, else determine if they thought he had overstated or understated the fact. When not occupied in searching out those he had supposedly deceived, he brooded over his words and acts at home and was confessedly miserable. Strangely enough, he attributed his psychoneurosis to a former clergyman, under whose preaching he had sat for some years, who had worked upon his nerves through too strict and frequent presentation of the rigors of the divine law. His wife's intuition doubtless struck the cause more accurately by her simple statement that he had always had a supersensitive conscience, which had recently completely gotten the upper-hand of him.

Another case that came recently under my notice and care was of a lady made miserable by fears of disease when she was fourteen years old—a very impressionable age. She happened to read of the lepers in the South Sea Islands, to whom Father Damien ministered. When she read of their hands and feet rotting off and their faces being eaten by the disease, she claimed to have fainted, and when she came to herself repeatedly shuddered from hand to foot. For a dozen or more years after that psychic upset, she lived in abject terror of the disease. Reading of cases in distant cities threw her into spasms of fear, accompanied by insomnia and tears. She was seized with an abnormal longing to read in dictionaries and encyclopaedias about the disease's symptoms, and could talk as intelligently as the specialist about the different kinds of leprosy, their forms and action. So morbid was she upon the vexing subject, that upon entering a trolley-car or train, though pressing engagements called and her fare was paid, if any face within sight had pimple or sore, she would bound from the car as though shot out of a catapult. No Chinaman or brown-skinned Oriental was passed on the street, for fear of contagion. No travel

in other cities or lands was entertained for a moment. In spite of all this precaution, she was sure she would contract leprosy and die with it, for she assured me she had contracted small pox and other diseases through fear of them. To both my surprise and her's she was cured of this alarming psychoneurosis through suggestion, and quite apart from the aid of hypnosis, and is now rejoicing in a normal outlook upon life, never flinching, let alone fleeing in the presence of Chinamen, Oriental or American of blemished countenance. Psychasthenia may be considered a neurosis rooted in the subconscious self, inasmuch as the conscious and reassuring mind neither causes nor dominates the psychical situation. The phobias are automatic in their expression; as instinctive and habitual as any deep-set trait of character. Such shows subconscious origin and location, and the need of treatment that gets deeply and strongly into the depths of personality.

When we come to hypochondria, we overlap upon all these heretofore mentioned neuroses. In fact, neurasthenia used to be called hypochondriasis, but according to Dr. Schofield, that was some years back, when nervousness and a good many other indefinable ills were supposed to be traceable to a disordered liver. Dubois[1] says "mild hypochondria could, without straining matters, be put in the pigeon-hole of neurasthenia, were that pigeon-hole not already full. Then it borders on hysteria, which, feigning somatic neuroses, even most organic constitutional diseases, is not far removed from sure belief in the possession of such maladies. Also melancholia in both its mildest and strongest forms is often an attendant upon hypochondria. Then again, many neurologists refuse to use the term "hypochondria," preferring to put all such cases under the "psychasthenia" heading. We must, however, give to this malady a distinct and very

[1] Dubois, p. 195.

positive content, ascribing it to all symptoms that postulate a fixed delusive notion of some particular idea or local suffering. Herman defines it as the belief without cause of serious bodily disease. Moreover, it is the most widespread psychical ailment of all psychoneuroses. A prominent physician recently told the writer that every man and woman in the United States was a neurasthenic. Though I fail to join issue with the statement, I believe it is not too radical to assert that everybody, at some time or other is a hypochondriac. Dubois[1] speaks of "many people who, when the least hurt, imagine themselves possessed of functional or organic malady; when they have a cold, consider themselves phthisical; have a cancer in the stomach the moment they feel a heaviness in the epigasticum; who believe themselves tabetic because they have staggered a little when walking. Physicians and medical students are subject to this infirmity—it is often passing—but they should take care and not let these phobias grow. When anyone goes mad, he does so along the line of his former mentality and I have found, toward the fifties, symptoms of very serious hypochondria in fellow physicians, who, during their student period had merely shown a weakmindedness which exposed them to the jests of their comrades."

Dr. Walton[2] is authority for the statement "that the victim of hypochondria may be the picture of health or may have some real ill regarding which he is unduly anxious. His consultation with a physician is likely to be preceded by letters expressing his exact condition, naming his various consultants, also naming the various remedies he has taken. At the time of his visit, notes are consulted, lest some detail be omitted. In his description, anatomical terms abound—thus, he has pains in the lungs, heart or kidneys. Demon-

[1] Dubois, p. 196.
[2] Dr. Walton's "Why Worry," p. 101.

stration by the physician of the soundness of these organs is met by argument at which the hypochondriac is generally adept."

My own records recall to me such a case. A professor from a western university came to me with tuberculosis of the lungs, evidence of which was his very hard cough, and a cancer or tumor on the liver, proof of which being abdominal pains, also an anaemic condition of countenance, and a well-developed Bright's disease, because of pains in the lower part of the back. He reminded me he had been examined by three leading specialists, who had deceived him upon his real condition, lest he worry unduly. But, said he, their deception was to him a more aggravated cause for worry than his actual diseases. I had him again examined by a competent physician, who reported "No organic trouble." Two hours' interview failed to convince him of these several physicians' honesty and correctness of diagnosis. But he admitted having from his earliest remembrance been morbid upon diseased conditions of his internal organs; also of long-standing neurasthenic conditions that had expressed themselves in insomnia, loss of appetite and various phobias which were sufficient to account for his hallucinations and psychic pains. He went away, wondering and grieved that no one, not even a clergyman—would tell him the truth when he knew so well what his maladies were.

It is to be noted that the more obscure and inaccessible the bodily organs, the more likely is the hypochondriac to fix his morbid attention upon them. Dr. Walton's[1] humorous illustration of the experienced invalid and the young doctor, admirably covers such extreme cases. "It seems a man who was constantly changing physicians at last called in a young physician just beginning his practice—'I lose my breath when I climb a hill or a steep flight of stairs,' said

[1] Dr. Walton's "Why Worry," p. 115.

the patient—'if I hurry I get a sharp pain in my side, which shows a serious heart trouble." "Not necessarily sir," began the physician, but he was interrupted. "'I beg your pardon,' said the patient, irritably—'it isn't for a young doctor like you to disagree with an old and experienced invalid like me, sir.'"

The minor phenomena of hypochondria are, however, common and sufficiently well defined to deserve recognition. Huxley, it will be remembered, rather delighted in calling himself a hypochondriac because always troubled, and unduly so, about his health. Dr. Johnson was so self-conscious that he formed the habit of retracing his steps and repeating his acts to satisfy his hypochondriacal requirements. Carlyle was a slave to hypochondria, which can be traced back to his boyhood which was always shy, sensitive, proud and pugnacious, and in mature life, could not bear the crowing and cackle of his neighbors' hens and did his literary work in a sound-proof room constructed for the purpose. Even this did not prevent incessant internal discomfort. "No sleep for three weeks," he exclaims, "from impossibility to be free from noise! I impute nine-tenths of my present wretchedness to this infernal disorder of the stomach." "Sharp pains grasping me about the heart and strange dreams haunting me." But Froude, the historian, a careful observer of Carlyle's condition, contends that the functions of his stomach were never so far wrong as he imagined. "He was always impatient, moody, irritable and violent," continues Froude, "these humors were in his nature and he could no more be separated from them than could his body be separated from his shadow."

It must not be inferred that the hypochondriac's imaginary diseases are unreal. They are the most real facts in the world to him and take precedent of all other facts. Our subjective feelings are much more real than objective facts,

for they are the positive conditions of personality that cannot be effectually argued or laughed away. These are veritable functional neuroses, shackling the will, paralyzing all ability for decision and mental concentration, inducing weak memory, loss of self-control, self-reliance, self-direction, and conducing irritability, dispondency, fear, exhaustion and sometimes suicide. All such psychoneuroses lie beyond the reach of drugs and surgery, medical prescriptions as well as the electric current, a well-arranged system of baths, or strenuous exercise. Mental, moral and religious treatment are alone competent for cure. Psychotherapy meets the need and opens up a remedial world of vitalizing, energizing, reconstructive forces that destroy the embodied dissociations, restoring the psychical equilibrium and making a man free and normal.

Psychotherapy and Psychology

But what is this new thing, psychotherapy? What its correlations with psychology? If psychology be the science of the mind and its activities and relations, psychotherapy may be thought of as the application of psychological principles to psychical and physiological conditions, especially upon their pathological side. We somewhat bridge the chasm between psychology and psychotherapy through the media of such terms as physiological psychology and pathological psychology. The tendency has for a long time been away from the older psychology permeated with philosophical speculation, with its unchanging theories upon our mental states; away from the simple study of memory, reason, and the theoretical will to their changing content in particular individuals under particular conditions and in a particular state of health. The constant investigation in a critical and scientific age of pathological conditions has revealed phenomena that necessitates psychological activity

and broadening of the professional field to take in the changes and oscillations characteristic in both the normal and abnormal individual, thus changing the psychological concept from an abstract to a real and vital thing. As Janet says, "it has ceased to be purely static and has become dynamic." Or, as Stanley Hall contends, "psychology should now be dominately inductive and practical. He illustrates this condition by stating that psychology lives not merely in the study, but where doubt and belief, sanity and inherited insanity struggle together, where temptation and cowardice wage their wars in the mob and cloister, where rage, terror, pity become convulsive and sweep all before them, and where love of the lie usurps that of the truth. Psychology in our practical age, must first study and teach how to live, love, learn, labor; must have something to say to all who reflect on reproduction, disease, health, and thus must first serve man well if it would later rule him wisely."

This modern adaptation of psychology to all changing conditions of consciousness premises an irregular and indefinable territory, because one as extended as the universe of mortals. But who is competent to conceive of the content of our mortal universe with its multitudinous relations and correlations of mind and body, and the never-determined distinctions between consciousness and matter? And there is other than consciousness to be reckoned with whether it be consciousness and matter or consciousness of matter which, to the idealist, gives matter its vitality. The paradox of unconsciousness presses for psychological attention. This carries us so far afield into such subliminal and subconscious depths that no possible limits to the field of psychology can ever be expected to be determined. Surely no *a priori* limits can be set. They must be of a continuously *a posteriori* nature and of a boundless empirical range. Is it not because of such limitless necessity that

so keen an observer as Professor Cattell claims for psychology the freedom of the universe for its subject matter, in which every method of science is employed? How then can it be that there is even up to the present time no new psychology, as Professor James claims, "but only the old psychology which began with John Locke, plus a little physiology of the brain and sciences and theory of evolution and a few refinements of introspective details?" If that be so, no wonder James,[1] in his "Principles of Psychology" launches such withering indictments against the psychology of a few years ago, when he affirms "Psychology is but a string of raw facts; a little gossip and wrangle about opinions; a little classification and generalization on the mere descriptive level; a strong prejudice that we have states of mind and that our brain conditions them; but not a single law in the sense in which physics shows us laws. At present, psychology is in the condition of physics before Galileo, and the laws of motion or chemistry before Lavoisier." Truer to facts is the statement of Cattell "That the study of psychology is limited only by the capacity of the human mind. The barrenness of the traditional psychology is as verily distanced and out-dated by the vital and practical progress of today, as is the rudimentary alphabet by the words and sentences expressive of the thought of an age of the most varied and astute thought. The former was rudimentary and simple indeed, both in conception and phraseology, while the later is so magnificently complex and complicated, that even present postulation of its future evolution in terms of practical application is beyond the prophecy of the most sanguine and optimistic minds."

As rudimentary and theoretical as the earlier psychology was, there has been more or less steady though involved advance in psychological conception, since the early Greek

[1] James, "Principles of Psychology," p. 1.

philosophical period. From the time some 450 years before the Christian Era, when Zenophanes, Parmenides and Zeno with their doctrines of being, substance, movement and matter, opposed the empty conceptions of Greek mythology; and Heraclitus claimed that the primal element of the Universe was fire, and Empedocles, that while matter was immutable, all bodies were in a state of constant change; up to Plato, Socrates, Aristotle and the Sophists, knowledge has displayed a psychologic significance. Then hear Socrates call his fellow Athenians away from their cosmological speculations, to the consideration of man, as the measure of all things. Therefore, "Know thyself." Here begins with Plato and his well wrought-out system of "ideas," and Socrates with his problem of knowledge, what Professor Baldwin calls the era of "Experimental Subjectivity." Beginning with Aristotle, who lodged the idea in the material form and read the subjective into the objective, as Baldwin so well affirms, the movement is outward.

In Mediaevalism, when the intellectual and religious contest was between scholasticism and mysticism, the psychological side of introspection had no representation. Both contributed, however, indirectly to our present psychotherapeutics—scholasticism in training the mind to think as well as in paving the way to that renaissance which marked the breaking up of dogma and the emancipation of the individual into the freedom of thought which blossomed psychologically in the empiricism of Locke and Hume, and the positivism of Rousseau and Auguste Comte, and the genetic philosophy of Fechner and Lotze; mysticism which brought God within mortal touch as a vitalizing, remedial force. In the seventeenth century, the science of psychology, though distinctly born, was not differentiated from its metaphysical parentage, as embodied in the conceptions of Descartes Malebranche, Leibnitz and Kant. How well

Leibnitz anticipates our modern positions when he states that unconscious acts of mind are called obscure ideas, insensible perceptions.[1] Even Immanuel Kant could prove his place to be among the most advanced twentieth century psychologists, through such statement as this that "unconscious sensations and obscure perceptions form the larger portion of our mental states[2]." The nineteenth century certainly established the science of psychology and pointed the way for exclusive development. It is reserved for the twentieth century to make application of principles to life in all normal and abnormal conditions, the most important demonstration of which will doubtless be along the lines of experimental psychology, or what we designate, "Psychotherapy."

Consciousness and Unconsciousness

To the twentieth century psychologist, the human consciousness is the most fascinating thing in existence. And the twentieth century physician, as truly as the neurologist, must attach his diagnosis to more than the patient's disordered body. To be in the broadest sense effective, he must take into account abnormal mental states, that are inextricably interwoven with primary somatic conditions. Temperament, habits of thought, moral and emotional motives, resiliency of will, even philosophical and religious view points in the one treated, are as much factors to be reckoned with as physiological dissection, anatomical disorders, muscular weakness and chemical analysis. "Symptomatology," says Professor MacDougall, "is as much a matter of psycho-physical responses as are physiological tests. This is true whatever the nature of the disease . . . above all, where these affect the cerebro spinal system. . . ." It is not necessary to complicate the matter by any discus-

[1] Leidnitz, "Nouveaux Essais," Vol. 11, Chapter 1.
[2] G. H. Lewes, "Study of Psychology," p. 17.

sion of the relations of mind and body, nor to take sides in the debate between interaction and parallelism. Stated in purely physical terms, it is but recalling to mind the necessity of taking into account the intimate and peculiar influence which conditions of excitement in the central nervous system exert upon the general metabolism of the body and the question is solely as to the treatment to be selected. A thorough course, he continues, "in the general science of mind is desirable in the preparation of every practitioner; but for the nerve specialist, a knowledge of the results of experimental psychology on normal function, as well as its variations, is absolutely indispensable. In his work, practice, as well as diagnosis, is largely mental in its nature. Drugs take a secondary place. The patient must be soothed, encouraged and guided into new mental habits by a process of suggestion, stimulation and restraint. The establishment, through mental therapeutics of a more central mental condition, supplemented by food, air and exercise, is trusted to bring about a restoration of equilibrium among the secondarily disturbed processes of the body. Psychophysical investigation has transformed our views as to the nature and origin of idiocy and epilepsy, of hysteria and insanity, and all troubles of that misused and afflicted class of the mentally deranged, and has made over the whole system of treatment to which they are subjected. It is affecting more and more widely the general practice of the physician by emphasizing the significant part which mental attitude plays in the history of the disease." "The individual soul," exclaims Professor MacDougall, "is unqualifiable and can be treated only intuitively. Its education is the result of formative influences which can be expressed only in terms of will and personality."

Professor Calkins assures us that the self must be taken into the account, for it undergoes a development which is

psychic and not physiological, and refers to the change central in self-development as correlated with physiological processes, but not identical with them. All such professional conclusion opens the way for the science of psychotherapeutics, for as Dr. Weir Mitchell claims

"Tis not the body, but the mind that's ill."

And when we bring the entity man or self into the problem, our consideration becomes extremely complicated, for consciousness is vastly more than a series of ideas. As Professor Calkins says, "The self has permanence and identity, and is a growing and expanding thing. It is, moreover, not a temporal reality at all. Selves are untemporal. Both metaphysics and psychology disclose this untemporal quality, but each self has temporal relations with its own past and future, and with the temporal experiences of other selves. It is this ever heightening, deepening and broadening conception of the content of consciousness unto all states and relations of the soul, or the untemporal self, that makes a demand for moral and religious, as well as for mental remedial principles to be brought into the solution of the therapeutic problem.

It is interesting to ask and difficult to determine the part enacted in psychotherapy by the unconscious mind. Just here we enter a maze of conflicting opinions. The older psychology had no use for the term, nor for the content and characteristics of the supposed field connoted by the term. Its shibboleth was "no consciousness—no mind." Such definition makes even that fearless, psychical investigator, Professor James,[1] in his published volumes on psychology, limit psychology to the definition of Professor Ladd and that it is the description and explanation of states of consciousness as such. James[2] elaborates this conserva-

[1] James, "Psychology," p. 1.
[2] "Ibid," p. 2.

tive definition in these two data—(1) "Thoughts and feelings or whatever other names transitory states of consciousness may be known by; (2) knowledge of these states of consciousness of other things." Later on, James feels such ground insecure. Such conclusion fails to satisfy. All the knower can know leads far afield of such statement. "Everyone assumes that we have direct introspective acquaintance with our thinking activity as such . . . yet I must confess that I cannot feel sure of this conclusion. It seems as if consciousness of an inner activity were rather a postulate than a sensibly given fact—namely, the postulate of a knower as correlative of all the known."[1] A later statement still shows the tendency of James' psychologic thought. "The most important step forward that has occurred in psychology since I have been a student of that science, is the discovery that in certain subjects, at least, there is not only the consciousness of the ordinary field with its usual center and margin, but an addition, thereto, in the shape of a set of memories, thoughts and feelings which are extra marginal and outside of the primary consciousness altogether, yet able to reveal their presence by unmistakable signs. I call this the most important step forward, because, unlike the other advances which psychology has made, this discovery has revealed to us an entirely unsuspected peculiarity in the constituency of human nature."[2]

It is this extra marginal set of thoughts and feelings, forming an entirely unsuspected peculiarity in our human constitution, that is to be, as it appears, the battle ground of opinion and conviction during this century. Professor Montgomery[3] goes so far as to say that "a science constructed without reference to an abiding extra conscious-

[1] James, "Psychology," p. 467.
[2] William James in "Hypnotic Therapeutics," by Dr. John Quackenbos, p. 1.
[3] Professor Montgomery, "Mind," Vol. XIV, p. 499.

ness source of actuation and emanation will end in vacancy, our own conscious content being brought into existence by extra conscious powers and processes." Were such radical statement not abundantly reinforced by psychologists of repute the conservative position of such authorities as Ladd, Boune, Sully, Royce, Hutton, Ireland, Kirchener and Baldwin, might hold sway. Professor Ladd[1] denies that unconscious psychical or mental states belong to the mind, and shows the vain attempt of trying to force a metaphysical conception of mind which does not include consciousness as the one characteristic that distinguishes mind from not mind. An unconscious mental state is as inconceivable as "wooden iron" or the "unconscious conscious." Ladd[2] further claims that the term psychosis is not to be employed for any sort of processes that are not in consciousness; also, that the unconscious is the physical which is not conscious. Professor Boune[3] claims that "consciousness is the specific feature of all mental states. If the soul performs unconscious functions, they have no mental claim." Professor Sully[4] numbers among illusions, the belief that there are unconscious elements and processes in the human mind, and speaks of the deep regret of every earnest psychologist at the mischief wrought by this idea of unconscious mental processes in contemporary psychology. Professor Royce[5] sees thought to be a series of active conscious states, claiming Von Hartman's "Philosophy of the Unconscious" to be full of contradictory notions. Hutton[6] states that we should not attribute the cleaning up of a subject in our minds to unconscious cerebration, but to forgotten intervals of conscious intel-

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[1] Ladd, "Philosophy of the Mind," pp. 395 and 385.
[2] Ladd, "Ibid," p. 381.
[3] Boune, "Introduction to Psychotherapy," p. 286.
[4] Sully, "Pessimism," pp. 193 and 194.
[5] Royce, "Mind," Vol. VIII, p. 33.
[6] Hutton, "Contemporary Review Inquiry," 1874, p. 201.

lectual work. Professor Baldwin[1] sees unconscious mental states to have no nobler origin than either a physical excitative, inadequate to a mental effort, else from the mental side as a state of least consciousness. Doctors Ireland and Kirchener are as strongly opposed to the paradox of unconscious mental activities and speak of the pretension of unconscious cerebration.

But over against these of the conservative school are as trustworthy advocates of the modern theory of the unconscious mind. Gallon[2] in his "Inquiry into the Human Faculty," speaks of only a minute part of the multiplicity of mental operations falling within the ken of consciousness. Hack Tuke[3] speaks of intellectual activity and mental modification going on without the consciousness of the subject. Dr. Laycock[4] speaks of unconscious mental life and action as a universally accepted guide in the affairs of life. Professor Bascom[5] claims that psychologists no longer believe that all the factors of mental phenomena can be discovered by mental introspection. All these lead up to that psychological extremist Myers, who treats of not only the unconscious mind, but of the mind's subconsciousness and supraconscious operations. He prefers the term "subliminal" for all that lies below the threshold of consciousness. "I suggest," writes Myers, "that each of us has an abiding psychological activity far more extensive than he knows. . . . For all which lies below the threshold, 'subliminal,' seems a fitter term than 'unconscious or subconscious,' which are misleading. I hold that the spectrum of consciousness is in the subliminal self indefinitely extended at both ends. At the inferior or physical end (sub) it in-

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[1] Baldwin, "Psychology," p. 58.
[2] F. Gallon, "Inquiry into Human Faculty," p. 202.
[3] Hack Tuke, "Dictionary Psycho-Medico," Vol. 1, p. 348.
[4] Dr. Laycock, "Mind and Brain," Vol. 1, p. 161.
[5] Professor Bascom, "Comparative Psychology," p. 38.

cludes much that is too rudimentary to be retained in the ordinary consciousness of an organism, so advanced as man's. As to the superior or psychical end (supra) it includes an unknown category of impressions which ordinary consciousness is incapable of receiving, save as messages from the subliminal consciousness."[1]

Dr. Schofield, to whose book, "The Unconscious Mind,"[2] I am indebted for many of the above references and who is, perhaps, our most radical and consistent advocate of the modern psychologic theory, goes to as extreme lengths as does Myers in showing the relation between the conscious and unconscious mind. He likens them to the visible and invisible parts of the spectrum of the sun's rays. "We know," he says, "that the chief part of heat comes from the ultra red rays that show no light, while the main part of the chemical changes in the vegetable world are the results of the ultra violent rays at the other end of the spectrum, which are equally invisible to the eye and are only recognized by their potent effects. Indeed, as these invisible rays extend indefinitely on both sides of the visible spectrum, so we may say that the mind includes not only the visible or conscious part, and what we have termed the 'subconscious,' that which lies below, or at the red end; but the supraconscious mind—that which lies beyond at the other end—and including all those regions of higher soul and spirit life of which we are only at times vaguely conscious, but which always exist and link us to the eternal verities, as surely as the subconscious mind links us to the body. The mind reaches all the way and while on the one hand it is inspired by the Almighty, on the other it energizes the body, all of whose purposes it originates. We may call the supraconscious mind the sphere of the

[1] F. W. G. Myers, "Journal of Psychical Research Society," Vol. VII, p. 306.
[2] Dr. Schofield, "Unconscious Mind," p. 94.

spirit life; the subconscious, the sphere of the body life and the conscious mind the middle region where both meet. . . . The truth is that the mind, as a whole, is an unconscious state, but that its middle registers, excluding the highest spiritual and lowest physical manifestations, are fitfully illuminated in varying degrees of consciousness, and that it is to this illuminated part of the dial, that the word *mind,* which rightly appertains to the whole, has been limited." Maudsley[1] gives us as radical a statement, when he claims that "the brain not only receives impressions of consciousness but registers impressions without the coöperation of consciousness, elaborate material unconsciously, calls latent powers into activity without consciousness, and responds as an organ of organic life to the internal stimulae which it receives unconsciously from the body."

The extreme positions for and against the presence and power of the subconscious are admirably illustrated in the instances given by Dr. Morton Prince in his paper before the International Congress on "Abnormal Psychology;" also by Dr. G. Thompson in his "System of Psychology." Dr. Prince, it should be noticed, believes in the subconscious state, even to the extent of the foundation of a secondary personality, but sees such states to be formed by functional dissociations, from the main system of ideas that make up the personal consciousness, but unifies them with abnormal syntheses and automatisms. He asks if subconscious states habitually exist normally, or are they always either artifacts or abnormal phenomena. He thus leans to Janet's theory that "a doubling of consciousness is always the sign of a diseased mind; thus, that subconscious states are abnormalities and manifested in the phenomena of absent-mindedness and abstraction,—thus, pathological." "I do not find," states Dr. Prince, "that my own conscious

[1] Maudsley, "Physiology of Mind," p. 35.

activity appeals to anything else but my own conscious processes, or that I am conscious of any such easy way of settling my problems, as to have an unconscious mind reach a solution my conscious mind could not. As an ordinary man, I do not find that I can rely on any other consciousness to write this address, but the thoughts which I laboriously elaborate." Dr. Thompson, as competent an authority, states "I have had a feeling of the uselessness of all voluntary effort and also that the matter was working itself clear in my mind. It has many times seemed to me that I was really a passive instrument in the hands of a person not myself. In view of having to wait for the result of these unconscious processes, I have proved the habit of getting together material in advance and leaving the mass to digest itself until I am ready to write about it. I delayed for a month those parts of this work relating to attention, association and representation. I went to my library each morning and persevered days in succession, reading Aristotle, Locke, Hartley, Mill, Bain, Spencer, Lewes and Hodgson, and then would sit for hours looking out of the window at the park. I was not yet in a proper mental state to say what ought to be said. One evening when reading the daily paper, the substance of what I have written flashed upon my brain and the next morning I began to write. This is only a sample of many such experiences."

I think we have more of us had the experience of Dr. Thompson than that of Dr. Prince. How often have we tried to recall a name of person or place and the more conscious we became of trying, the less successful at recalling? But when we ceased our conscious effort and attended to other things, else left the mind a blank, the name came up into consciousness. Then, frequently, we have been muddled over a certain mental work. We have done our utmost

to see the thing clearly; it may have been a lesson to be learned; a problem to be solved; an oration or poem to be committed to memory. We have gone to bed in that blurred condition of mind, but upon awakening the clear, strong mental condition we longed for and could not realize had arrived.

Mysterious, unconscious powers lent their aid. That the mind includes unconscious parts which become at times causes of consciousness, no careful observer can doubt. While it remains the great unexplored country, apparently limitless in extent and resourcefulness, much can be conservatively inferred concerning it, which both observance and experience verify. It may not be claiming too much to consider it the residential realm where we live. Such conception will eventually be seen to be nearer the truth than the declaration that we live in our conscious states, or in our reasoning capacity. While these postulate initial existence—namely that of experiment, investigation, diagnosis, acquisition, judgment and conclusion; all secondary states, such as those of instinct, intuition, habit, character, lie deep down in the realm of being. We love to boast of being reasonable beings, of thinking before we speak, of investigating before we affirm, of consciously paying heed before we act, of consistently willing before we undertake, but we do so only as students and strangers to the truth that we are striving to express. Once masters of the unique situation whatever it be, the involved truth expresses itself, using our mental and physical faculties for its functioning. This is seen in every masterly act of life. In fact, automatic action is more normal than abnormal, which, when inhibited by reason and consciousness, breaks up influential and powerful expression. The neophite acquires his art consciously and painfully, through most laborious reasoning and investigating and study. Not until these conscious

methods hand down their gains unto the unconscious realm, where they become reinforcements for consciousness and realization in terms of instinct, intuition and autonomous action, is musician and artist and he of commonplace experience strong enough to exert pleasurable influence and awaken admiration of his talent and genius. The moment he lets the inhibitions of reason or consciousness come in, he introduces a disturbing, even destroying, element, as is noticeable in every intrusion of self-consciousness.

Philosophic and psychologic authority for such affirmation is multitudinous. The problem is illumined by such far-away writers as Sir William Hamilton and Noah Porter, who support this view, while Wundt, Hartmann, Jessen, Rosmini, Holman, Montgomery and Bascom, reinforce it. Sir William Hamilton[1] states, "I do not hesitate to affirm that what we are conscious of is constructed of what we are not conscious of. Thus, those mental modifications are not in themselves revealed to consciousness and we are thus constrained to admit as modifications of mind what are not phenomena of consciousness." Noah Porter[2] adds, "That the soul may act without being conscious of what it does and that these unconscious acts affect those acts of which it is conscious." Wundt[3] says, "I admit the necessity of referring the origin of sensuous perceptions and of consciousness in general, to unconscious logical processes, since the processes of perception are of an unconscious nature and only their results appear in consciousness. The suggestion of the logical character of the processes of perception are of an unconscious nature and only their results appear in consciousness. The suggestion of the logical character of perception possesses the essential require-

[1] Sir Wm. Hamilton, "Lectures on Metaphysics and Logic," Vol. 1, p. 348.
[2] Noah Porter, "Human Intellect," p. 103.
[3] Wundt, "Beitrage Zur theorie der Sinnes Vermehrung," pp. 169, 375, 436, 488.

ments of a very well grounded theory. That would be at once the simplest and most appropriate expression under which the facts of observation can be combined. The first act of apprehension which yet belongs to a sphere of unconscious life is already a process of inference; it being proved that there is not merely a conscious, but unconscious thinking. We believe that we have hereby completely proven that the assumption of unconscious logical processes is not merely competent to explain the results of the processes of perception, but that it in fact also correctly declares the real nature of these processes, although the processes themselves are not accessible to inward observation." Edward Montgomery[1] states that "the mental process must be wholly dependent for its origin to subsistance on an actuating substratum of unconscious force." Jessen[2] claims that "when we reflect on anything with the whole force of the mind, we may fall into a state of an entire unconsciousness, in which we not only forget the outer world, but also know nothing at all of ourselves and the thoughts passing within us. We then suddenly awake as from a dream and usually at the same moment the results of our meditations appear clearly and distinctly in consciousness without our knowing how we reached it." Rosmini[3] affirms that "a close attention to our internal operations, along with induction, gives us this result that we even exercise ratiocination of which we have no consciousness, and generally it furnishes us with this marvelous law that every operation whatsoever of our minds is unknown to itself until a second operation reveals it to us." Professor Holman[4] says "All precepts are practical judgments and are intuitive judgments. The mental processes involved are what is called

[1] Ed. Montgomery, "Mind," Vol. 7, p. 212.
[2] Jessen, "Psychology," quoted by Hartmann Phil. of the Unconscious, Vol. 1, p. 235.
[3] Rosmini, "Psychologia," Vol. 1, p. 196.
[4] Prof. Holman Intro. to Education, pp. 299, 300.

'practical reason.' Its most striking form is seen in those inventions which are so often made by artisans. There is no explicit thinking out of matters by bricklayers, but a kind of almost instinctive realizing that such materials will lead to given practical results. The individual regards the matter as one of doing, and not of thinking." Professor Bascom[1] states "It is inexplicable how premises which lie below consciousness can sustain conclusions in consciousness; how the mind can take up a mental movement at an advanced stage, having missed its primary steps."

The most convincing example of the action of the subconscious mind, possibly, ever give to the public is that edited by Professor Child,[2] in the "American Journal of Psychology." It gives the questions and answers of two hundred university students and professional persons, one hundred and fifty-one being men—forty-nine being women. "When you cannot recall a name you want, does it seem to come spontaneously without being suggested by any perceived associations of ideas? Eleven per cent answered "No." Eighty-one per cent answered "Yes." "Does such recovery ever come after sleep?" Seventeen per cent answered "No." Fifty per cent answered "Yes." "Have you ever had some new discovery or invention flash into consciousness as a clear conception?" Thirty-two per cent have had this conception, and of these, seventy-one per cent had it flash into consciousness suddenly. "When perplexed at mathematical problems or other puzzles, have you left it, turned your attention elsewhere and after some time found you could master it easily?" To this, seventy-seven per cent answered "Yes," and twelve per cent "No."

Professors Kirchener and Wundt, seem to give us the philosophy of these subconscious phenomena, in the follow-

[1] Prof. Bascom, Comparative Psychology, pp. 31-33.
[2] Prof. Child, "Am. Journal of Psychology," Vol. 5, part 2.

ing words: Kirchener[1] states that "our consciousness can only grasp one quite clear idea at once. All other ideas are, for the time, somewhat obscure. They are really existing but only potentially for consciousness—*i. e.*, they hover, as it were, on the threshold of consciousness. The fact that former ideas suddenly return to consciousness is simply explained by the fact that they have continued psychic existence and that attention is sometimes voluntarily or involuntarily turned away from the present. The reappearance of former ideas is thus made possible." Wundt[2] says "The traditional opinion that consciousness is the entire field of the internal life, cannot be accepted. In consciousness psychic facts are very distinct from one another, and observation itself necessarily conducts the unity in psychology. But the agent of this unity is outside of consciousness, which knows only the result of the work done in the unknown laboratory beneath it. Suddenly a new thought springs into being. Ultimate analysis of psychic processes shows that the unconscious is the theatre of the most important mental phenomena. The conscious is always conditional on the unconscious."

We give much space to these convictions upon the integrity of the unconscious mind, because of the part that portion of the human personality is destined to play in all coming psychological investigation, also because of the writer's firm belief that it is this extended submerged realm of being in which is stored excessive latent energy and much remedial resourcefulness that can be utilized physiologically as well as mentally and morally. Undoubtedly, psychtherapy is dependent upon this unconscious tract of being for its remedial and curative work. Undoubtedly, suggestion, which is the supposedly curative implement in psychother-

[1] Kirchener, "Psychology," p. 205, quoted from Dr. Schofield's "Unconscious Mind," pp. 108 and 109.

[2] Wundt, "Physio-Psychologia," Intro. p. 5, quoted by Pibot, in "German Psychology of To-Day," p. 191.

apy, sets these buried subconscious forces working in behalf of health. But it is to be observed that neither professors of psychology in our universities, nor neurologists in actual practice are acquainted with these remedial subconscious forces; or, if acquainted with their existence, do not acknowledge their scientific integrity and value. For instance, so thorough a work as Professor Dubois', "The Psychic Treatment of Nervous Disorders," which is of recent date, shows neither acquaintance with, nor reliance upon, this supposed reservoir of psychic power. Multitudinous cures are wrought without analysis of mentality, save into its normal and pathological states. He makes much of mental forces, the ego, the effect of suggestion upon these entities, and especially of the hypnotic state. The nearest approach to a credence of a subconscious realm is perhaps in such statement as this: "This suggestibility becomes extreme when our convictions cease to become established in strange and unknown realms. . . . Our intelligence is always fragmentary; we are always ignorant of something."[1] Professor Munsterberg in his recent work, "Psychotherapy," emphatically denies the existence of a subconscious mind.

Many, if not all, modern neurologists show as little regard for the subconscious department of the mind's existence as Professors Dubois and Munsterberg. Both Professor Miller and Doctor Starr of Columbia University, show no acquaintance with, nor need of acquaintance with the subconscious mind. Professor Southard, assistant professor of neuropathology, Harvard University, goes so far as to make light of all subconscious forces, stating that "he has heard of a score of different names given to the subconscious mind, which is to him a mere will o' the wisp." Pro-

[1] Dubois, Psychic Treatment of Nervous Disorders," p. 113.

fessor Miller,[1] distinctly states that "what is done in effective suggestion is to set free certain energies in the brain that work favorably on certain functions of the body." Professor Miller claims that "all mental treatment is physical treatment. To talk to a man is to set up activities in his ears, nerves and brain, and those in his brain are the physical counterpart and reflection of the ideas that we suggest to him." Dr. Starr[2] states, Many critics draw back at the subconscious mind as though at the brink of some dark pit. Dr. Worcester's work referring to the 'Emmanuel Movement,' so called, does not rest upon the belief in a subconscious mind or as it has been more appropriately termed 'co-consciousness.' ". In this statement, I claim Dr. Starr erroneously estimates Dr. Worcester's belief. Such statement, however, shows Dr. Starr's reluctance to credit the existence of subconscious powers. He further states "The important thing is that certain suggestions will be carried out, not that it is the unconscious mind that carries them out. Let them be carried out by whatever mind forces will do the work. The only practical thing is that they are carried out. The proposition that the normal man has a co-consciousness is very disputable." Professor Miller quite agrees with Dr. Starr, when he affirms that "the work depends on no metaphysical views, but on something much more solid—experience." Here Professor Miller is correct. Dr. Dubois would be no more effective in his cures, in acknowledging the existence of a subconscious power. With all neurologists, physicians, practitioners, the remedial work depends on no metaphysical distinctions, but on the appeal to the resident constituent elements of personality, give to them what name we may. Whether brain forces do the work, or mind

[1] Prof. Miller, "N. Y. Times," Nov. 13, 1908.
[2] Dr. Starr, "N. Y. Times," Nov. 13, 1908.

forces, quite independent of the brain's functioning and purely psychical, matters not an iota. And it is significant that most present-day advocates of psychotherapy do not consciously make use of the subconscious mind as receiving a suggestion and assisting the curative work.

In running through the two volumes of "Psychotherapy" issued by the League of Right Living, which seems to be thoroughly up-to-date, and which is contributed to by Dr. Richard Cabot and Dr. James Putnam of the Harvard Medical School, Professor Angell of Chicago University, Professor Woodworth of Columbia, and Professor Simpson of the Hartford Hospital, no sympathetic recognition is given to the work of the subconscious mind. Neither Dr. Cabot nor Dr. Putnam mentions it in any way. Professor Angell dismisses the term with this word: "Some of the distinguishing facts may be 'subconscious,' as it is called. Certain German investigators have invented methods by which this subconscious stratum may be tapped. He, however, closes his article on 'Mind and Body' with the statement that there is needed the deepest knowledge—both therapeutical and practical of the psychology of the human mind, and the most penetrating insight into human character." Dr. Simpson uses the term in these relations: "Normally, these centres act automatically—'subconsciously,' if you please. There are certain general considerations connected with brain-structure and function, which, to my mind, make more comprehensible the phenomena of the psychoneuroses and of those secondary states of consciousness known as hypnotism and somnambulism, which are closely connected with them." Dr. Simpson quotes in this article, on the Nervous System, Dr. Boris Sidis, who claims that "hypnotism produces a cleft in consciousness. The primary consciousness is cut off and the secondary consciousness takes command, and this secondary

consciousness can do all that a man can do and sometimes more." He also quotes James as saying: "The stability, monotony and stupidity of the secondary self is often very striking—it is purely a servant at the command of the operator. It seems to think of nothing but the last order received." He further quotes Dr. Sidis as saying "It has no personality; it has no sense of rationality; it has no morality. It originates nothing; it does nothing of its own accord; has no judgment; no self-control; no will; no individuality." Finally, Dr. Simpson asserts "It is the belief of advocates of psychotherapy that the causation of these disorders lies primarily in the realm of mind—whether conscious or unconscious." Professor Woodworth sees psychotherapy as "an example of the influence of the brain on the lower centres and through them on the muscles and glands. In mental healing you influence the brain, and through it, the rest of the body." The nearest Dr. Putnam comes to the concession is to say the "mind is the parent of the body." "By the mind, we understand one form of the living principle of which the humblest sorts of vital energy are other forms."

We dismiss the discussion of the unconscious mind, by citing two modern authorities—one a doctor of philosophy —the other a prominent physician, who speak in most sweeping terms of its existence and function: Dr. Cutting[1] states "there is most mental activity of which we are not conscious. Some of this which at one time caused much conscious effort, is now carried on unconsciously through the mechanism of habit. Some other portions we have never consciously directed. All that part of the mind which ministers to somatic activity is an example of the latter. The respiration, heart-action, secretions of the

[1] Dr. Geo. B. Cutten, "The Psychological Phenomena of Christianity," 1908, pp. 15 and 16.

various organs, peristaltic actions of the stomach and intestines, regulations of the blood supply and other vital functions are all controlled by subconsciousness and any direct conscious effort to control these organs tends rather to disarrange and disturb functioning than to assist it. . . ." Because the subconscious controls these bodily functions, it is only by reaching it directly or indirectly that these organs can be effected through mental means. While this is an important office of the subconscious, it is by no means its principal work. It is the constant ally of consciousness. Subconscious influence is woven into every mental product. There is no doubt that subconscious impressions govern many actions every day. They may even force us in opposition to our reason. Thus we have impulses, intuitions, unreasonable dislikes and likes, love at first sight, convictions with reason to uphold them, or spontaneous ideas well worked out. Delusive, fixed, insane or hysterical ideas also find their source in subconsciousness. It is not a separate entity, nor is it antagonistic to consciousness; they work together. The two fields of mental activity are divided by what has been designated, "The threshold of consciousness." All above is consciousness; all below is subconsciousness, but they react on each other. The impressions which we consciously receive are not all that we get; the subconsciousness receives much which escapes consciousnes and may despatch certain impressions of consciousness at an opportune time, or if not definitely impressed, it may furnish a mood which cannot be consciously accounted for. Consciousness is selective and critical, the subconscious is not. It takes anything and everything without question, but it is not always allowed by consciousness to incorporate these things into the life. It is exceedingly imitative. What is often charged to heredity may be but the activity of the imitative subconsciousness.

Dr. Schofield[1] in his "Unconscious Mind," illustrates the relation between the conscious and unconscious mind, by this convincing figure: "A coral island, in the South Pacific, is a mere ring of rock in the water of insignificant size to the sailor, but to the biologist or geologist it is the highest peak of a stupendous structure that rises from the bottom of the ocean, as a mountain miles high. Commencing, as it does, in the very smallest beginnings, it remains unrecognized until it rises above the surface of the sea. We only see the top of this structure and call it an island, indeed it is all we are conscious of except by soundings or occasional glimpses of what is beneath on calm days or at low tides. In the same way it appears that the sum of the psychic forces, which we may call mental, and which constitute mind, only a very small portion is fitfully illuminated by what we call consciousness. The establishment of the fact of an unconscious mind has a great bearing on the training of children, for children can be molded unconsciously with much greater ease than through consciousness. It gives also a key to the cause and cure of many, if not most, diseases. It lays at last the foundation of character, conscience, of the entire ego, so long obscured by a psychology bounded by the conscious." Dr. Schofield[2] continues, "surely then, a part of our being that is the repository of such vast powers is worthy of more consideration than it has yet received at the hands of any psychologist, and we are convinced that once they relinquish their narrow prejudices and seriously take up the study of this great subject in a worthy manner, a new era will have dawned for their science. It will have been placed on a broad and impregnable basis and rescued from the opprobrium and contempt that at present it excites in so many quarters.

[1] Dr. Schofield, "Unconscious Mind." pp. 50-7.
[2] Dr. Schofield, "Ibid," p. 120.

The Subconscious Mind—The Soul

This array of authority for and against the subconscious leads to a religious conclusion, and one which it is to be hoped at no distant day will be conceded—even scientifically demonstrated. It is that the subconscious mind is the soul of man. Such conclusion accounts for all these varieties of opinion as to its existence. The neurologist occupied with sensory and motor nerves, brain centres, ganglionic neurons and the excitation of the neurons of the cerebral cortex cannot be expected to be friendly to purely idealistic and cosmic entities of spirit origin. No more the psychologist entangled still with the materialistic tendencies of physical science. Even Schofield and Hudson, neither of whom can be said to enjoy scientific recognition, though going to splendid extremes in defining the content of the unconscious mind, dare not identify subconsciousness with the soul. And as for scientific psychology, it sees mind to be simply a complex of psychical processes, the conscious mind being the functioning of those processes with awareness, the subconscious mind being the functioning of those processes with unawareness, in a physiological way. They concede that thought normally and naturally works out into outward, muscular movement, and under proper conditions inward, retarding or accelerating physiological processes. They concede, further, that wrong thinking as expressed in fear, worry, morbid imagination, as well as overwrought emotion, will interfere with the rythm and harmony of these processes, while right thinking and healthy emotion, will, under proper conditions, do much to correct wrong functioning. None of these even the most generous supporter of subconsciousness claims to possess any vision of the soul. To do such would be to wander far afield of scientific ground. But when Dr. Van Gieson, of the Willard Parker Pathological Institute, declares that his

investigation and experimentation assures him that fully ninety per cent of everyone's personality is submerged under the threshold of consciousness, it is well to ask if those depths of being that we never become conscious of, except in intuition, instinct, habit and character, are not that part of us made in the image of the Creator, and endowed with His characteristics. Such conception simplifies things amazingly and accounts for every claim made in behalf of subconsciousness. If we can believe it to be the individual manifestation of the Universal mind, we can see whence its latent remedial power is derived. If it has control of the organs and activities of the body, so that during sleep the lungs breathe, the heart pumps, the stomach digests, the liver secretes and the kidneys act as correctly and more so that during our conscious rational state, we can realize its potency. If, further, the mind's limits have never yet been discovered, we can see why not discovered,—because limitless. Such conception also shows why the suggestion that starts up its activity is so potent. The soul is not expected to be self-guiding. It is a secondary consciousness, dependent upon the intelligence or non-intelligence of its possessor, else some other intelligence to whom it looks for guidance. By and by in the eternities, when man's poor wisdom is no more, under the control of the Creator, the soul will have that opportunity to which, through conscience and revelation, it has been approximating through the years of the earthly pilgrimage. This view gives the broadest rational basis for psychotherapy, which means the remedying of our ills through mental, moral and religious principles.

The Religious Element in Psychotherapy

The above reflection brings us up to the religious side. Whether or not the integrity of the subconscious mind be

conceded, all advocates of psychotherapy acknowledge the remedial aid to be derived from vital religious faith. There is something within that responds to the religious trust in God and prayer, which shows these to be therapeutic agents in all diseases. The majority of physicians know that self-centred thoughts are the bane of all neurotic conditions. The writer recalls many cases of insomnia, indigestion, constipation, nervous headache, sluggish, despondent, morbid mentality, and pronounced physical inertness, that were broken up and superseded by normal mental and physiological functioning through the introduction of a God-consciousness to supersede self-consciousness. Professor Miller of Columbia speaks a strong word in behalf of the force of religious suggestion for mental disorders. Physicians who devote themselves to nervous diseases admit the importance of suggestion, but some doubt the legitimacy of religious suggestion. Why, they seem to ask, should any religious ideas be introduced into suggestion? Because religious ideas are the largest, the most comprehensive, the most adequate ideas that can be found for the purpose. They are not ideas confined to the moment or to the specific ailment—they pertain to a man's whole life and its arrangement. Religion is a discipline of the desires. Its aim is to fix the allegiance of the mind upon that in which it finds its comfort and its stay. Its aim is to make certain desires and interests permanently supreme, and others subordinate. It thus composes a disquieted mind, giving peace and rest. Those who minister to nervous illness know the need of peace and rest. As regards a specific ailment, religion says that it is the good, the fair, the sound, and the healthy that are divine and that are to be forwarded in this world. It bids the soul cast in its lot, its hope, its will with these; it bids the soul cleave to these in its daily thought and imagination and live as much as may be in the

ideal. It knows that thus to live toward the ideal is to invite the ideal and tends to realize it. This is simply a law of our being. It may be expressed in the analytic language of science. I have expressed it in a language more natural to the soul itself.

Dr. Starr desires us to see that these so-called religious forces are not outside the lawful course of nature nor of immaterial and supernatural origin. His affirmation is that "the forces for good and for health are divine forces, but within you, and tend constantly toward your recovery, and that it is only necessary to turn your face in their direction and put away the fears and anxieties that fight against these inward forces." "These are all expressions," Dr. Starr claims, "in the light of religious ideas, that it is wise to direct the attention to the bright side of things and to live upon the bright side rather than the dark." Dr. Starr's championing of the clergyman's entrance upon psychotherapy, in answer to Dr. Joseph Collins' contention against such clerical coöperation, is worthy of note. Dr. Collins, who was formerly president of the American Neurological Association, asks, "What is there about the ministerial profession that gives them a peep into the human mind . . . that is not vouchsafed to the physician?" Dr. Starr claims this question implies ignorance of the fact that a large number of persons in distress, both of body and of mind, turn rather to the clergy than to the doctor for advice and comfort. The Roman Church meets the demand by the confessional The other Christian sects have the same demand, but do not always meet it. Some pastors in the various churches, who are particularly sympathetic and are capable of putting themselves in the place of those who consult them, soon come to act as father confessors to a large number of their people, and thus acquire that intimate knowledge of conditions and circumstances which enables them to act as wise

guides for conduct and life. This—the pastoral side of the clergyman's work—necessarily gives the clergyman a "peep into the human mind that is not vouchsafed to physicians," and fits him to deal with many cases of mental uncertainty and distress in a way open to but few physicians. Now, if the same successful result can be produced by instilling religious confidence and by methods free from the dishonesty of quackery and without the mercenary element which enters into Christian Science, and mind cure, why not admit its use? I am not inclined to admit any supernatural element in this method of cure. In fact, my only criticism of this healing mission in Boston and New York is my reluctance to associate what I consider the result of the personal influence of the leaders with any supernatural element. I do not believe that the admitted miracles of Lourdes and of St. Anne de Beaupre are supernatural. But since the human mind in its weakness demands some supernatural theory to account for these miracles, why is it not legitimate for the Protestant Church, as well as the Catholic, to adopt means calculated to produce the ends desired; especially, as this means cannot be termed in any sense evil? As a physician, I have to admit that the influence of a firm religious belief is the best factor to enlist in the cure of alcoholism, and that it affords the most powerful stimulus in the conquering of evil habits and the maintaining of a moral life. There is nothing which doctors can command that compares for a moment in persistent, daily power over a man's conduct with his belief in all that the church—Roman or Protestant—stands for. Here is where the healing mission gets its power. And here is where it can accomplish many things which physicians are impotent to to attain."

In fact, in the hands of a Christian minister, suggestion can be filled as full of the good tidings of the Gospel of the

Son of God as the minister has in his own mind and heart. Numberless are the testimonies of a new, fresh, vital hold upon the Christian verities through treatment for mental and physical ills. The confession even of members and officers in the Christian church is that they have, for years, been worshiping an unknown God located so many leagues beyond the stars that faith and prayer were stereotyped credal expressions, imparting no spiritual uplift and containing no vital blessing for the tempted, care-pressed, sin-cursed victim of the ecclesiastical order. Psychotherapy in the hands of a devout clergyman not only banishes present ills and leads to positive, vital union of the human life to God, but makes the Bible and the church indispensable to human welfare. I know of men who have been communicants of the church for thirty years, who now at the advanced age of seventy rejoice for the first time in the consciousness of a personal God and a living Christ, that is filling life's eventide with blessing.

The opinions of Dr. Starr and Professor Miller point in the direction of the subconscious mind being the soul, and as such the repository of a divine life that can be relied on for therapeutic purposes. They are an emphasis upon what the medical fraternity are coming more and more to rely on, under the Latin term "Vis Medicatrix naturae"—namely, the natural power latent in the unconscious mind. Dr. Schofield would agree with Dr. Starr "that there is nothing of supernatural power in psychotherapy, because no need of such, the depths of being containing all needed divine therapeutic agency." Dr. Wilkinson[1] of London exclaims: "Every thoughtful practitioner will acknowledge that when his therapeutic reserves are exhausted, by far the most reliable consultant is the 'vis medicatrix naturae.' To ignore the fact that it is already in charge of the case

[1] Dr. Wilkinson, "The Lancet," 1897, vol. 2, pp. 15 and 18.

for days, when we first approach with our mixtures and tabloids, is at least a mistake in medical ethics. It is a power, a vital resistance to disease." Of course, it matters little whether we concede that the God-power is within or without. I, for one, hold to both hypotheses, within, as a resident, reconstructive divine energy, without, as both an imminent and transcendent power within and above the Universe. The soul needs all the spiritual reinforcement it can acquire. The diseased personality needs all the God-consciousness available. Reliance upon God as a wise and loving Father, to quiet the patient's fears and doubts, also, a consciousness of a divine life-energy resident in the Universe re-creating and vitalizing all the forms of nature, are as much needed as for the person to be introduced to the divine forces resident within his own being.

Psychotherapy has done valiant service, both in recognizing the need of coöperation between doctor and clergyman and in breaking down the hard and fast lines between the different spheres of man's psychic nature. The word of Dr. Cabot[1] is of value here. "I have defined," he states, "psychotherapy as the attempt to help the sick by mental, moral and spiritual methods. These methods overlap and blend into each other; indeed, I think it is proven beyond doubt that it is unwise to try to separate them, unwise, that is, to try to separate a person's mind from his soul, or his intellect from his moral life by any hard and fast lines. We must appeal to the whole personality, if we are successful in psychotherapy. This fact, I believe, has been more fully realized in America than elsewhere, and it is for this reason that the American type of psychotherapy seems to me to be something distinguishable and in many respects superior to any other type now existing. Realizing, as we do, that mental activity merges continually into moral and religious activity, we have not hesitated, here in America,

[1] Dr. Cabot, "Psychotherapy," Vol. 1, p. 7.

to associate the man of science and the man of religion—doctor and minister in a most favorable form of coöperation for the good of the sick. Out of this association has come what is known as the 'Emmanuel Movement.'" Professor Angell[1] also speaks strongly on the religious element in psychotherapy. His word is "It must be clear that if we can make any approach to restoration from diseased conditions by mental means, we shall be the more successful, the more powerfully we can appeal to the mind and the emotions. Now, among all the feelings to which we can appeal, few, if any, are so strong as those which we call religious. This fact is borne out by religious healing. No religion is without such phenomena, and in many of them such facts are brought forward as proof—positive of the truth and divinity of the faith. Christianity is no exception to the rule. Protestant Christianity has, however, until recently, disregarded the possibilities at hand. From the hygienic side there is a tremendous advantage to be gained from the religious appeal, wherever it can be used. Furthermore, it is to be recognized that many people will go to a clergyman with troubles which are in essence mental, that they would not think of consulting a physician about. These cases represent no small part to which human kind is susceptible. It is fortunate if the religious adviser be a man wise enough to handle these cases as they should be handled—namely, as pathological and mental, rather than primarily moral. Of course there is often a moral obliquity at the bottom of the matter, but after all the point here is that many cases sadly needing treatment and likely to get to a physician after it is too late to repair the damage, may be kept from the brink of serious mental trouble, if the clergy are alive to their opportunities and responsibilities."

[1] Prof. Angell, "Psychotherapy," Vol. 1, p. 67.

The Emmanuel Movement

Under this term this necessary union of physician and priest has been consummated. This movement was inaugurated in Boston, Mass., by Dr. Worcester, Rector of Emmanuel Protestant Episcopal Church, to put in practice the psychological and religious principles of psychotherapy. Within the three years, of its existence, it has spread rapidly through the cities of America and in Europe. All denominations are enlisted in this therapeutic work. The Episcopal Church has taken the lead, but following hard upon this initiative are the Baptists, Congregationalists, Methodists, Presbyterians, Universalists and Unitarians in such representative centres as New York, Brooklyn, Jersey City, Buffalo, Rochester, Baltimore, Philadelphia, Cleveland, Detroit, Chicago, San Francisco, Los Angeles and many smaller cities, from seventy-five to one hundred in all. The Roman Catholic Church has recognized the importance of the subject, in "Pastoral Medicine," a handbook for the clergy written by Dr. Alexander E. Sanford, and the Rev. Walter Dunne, bearing the imprimatur of the Archbishop of New York. In England, where Milne Bramwell, Lloyd Tuckey and A. T. Schofield, physicians and neurologists, have taken a prominent part in the psychotherapy movement Canon Wilberforce has held special services in connection with the work and the Bishop of London is interesting himself in it.

Such reference shows psychotherapy to be housed even though not incorporated into the organization of the church. Every ministerial practitioner, however, relies upon the diagnosis of a physician to be sure that the malady he assails is not of organic nature. His field is not the body, except as it manifests the functional neuroses. Primarily it is diseases of personality to which he gives his attention. We mean

by that diseases that impair and hinder the working of individuality and the enjoyment of life. Such diseases are neurasthenia in different phases and degrees, psychosthenia, hypochondria, insomnia, the milder forms of hysteria and melancholia, mental and religious depression, defects of memory, inability for mental concentration, loss of confidence in self and inability to speak in public, moral degeneration, worry, shame, lying, doubts, fixed ideas, obsession, various phobias, exaggerated emotionalism, irritability, groundless suspicions, immoral propensities, abnormal diffidence and shyness, suicidal tendencies, drug habits, excessive tobacco addictions, alcoholism, and above all a neurotic self-consciousness from which many of these maladies spring.

When physiological disturbances result from any of these ills, such as headache, vertigo, dyspepsia, constipation, the action of the heart, when the trouble is not organic, impaired blood circulation, muscular contraction, remedial results may be expected, and often these physiological maladies yield before the pathological mental states that gave rise to them. Relief is given, even though cure or positive allaying of the disturbance is not realized, for where pains are not banished patience and control are imparted to bear them. Personal attitude is changed. Mental attitude largely conditions our comfort and happiness. Maeterlinck says, "We suffer but little from suffering itself, but from the manner in which we accept it." An elderly lady, eighty years of age, suffering from persistent insomnia, said to me recently, "I am better—very much better, though I cannot sleep any longer than before." Before treatment, her three hours a night sleep nearly drove her distracted, caused incessant tossing and turning and the worry that naturally accompanies such unrest, and she wondered how long she could endure without losing her mind. Now she sleeps

no better, but rests all night long and acknowledges being refreshed in the morning.

The reëducational element in psychotherapy as the Emmanuel movement represents it, is of vast importance. It possibly exerts no more necessary, and certainly no more enduring influence than this. All persons are at some point or other superstitious, and it is often, as Lessing explains, "The superstition in which we were brought up never loses its power over us, even after we understand it." We can, however, be taught and trained out of our superstitions. It is amazing how much religious superstition there is even in enlightened America, centering in the conviction of an antagonistic Deity, an avenging God, and a morbid sensitiveness concerning early vices and His unforgiving attitude in consequence. Such induces melancholia and divers neurotic troubles. The educational work here is to Christianize the life by introducing a scientific interpretation of the Scriptures, rational conceptions of God's wisdom and love, and in destroying the demon of a diseased self-consciousness. For all evil habits that hamper and destroy healthy, normal, optimistic functioning of the ego, this educational process is productive of good. Between the multitudes of mortals afflicted with abnormal self-appreciation and the large remainder diseased with an abnormal self-depreciation, the range is extended indeed, that calls for the introduction of correcting, moralizing truth principles. Self-control is needed by the father and mother in the correcting of the children in the home. Self-reliance and direction are needed for every experience radiating from individual lives. A greater need still is a deepening and broadening consciousness of reliance upon God as a regulative principle in all healthy contemplation and endeavor, becoming a precious remedial measure for diseased fancies. Dr. Worcester affirms that many persons must actually

learn over again how to live. He continues, "Among the means at the disposal of psychotherapy an important place must be given to what is technically called reëducation. If the lesson of right living had been learned and practiced in early life, there would be no need of reëducation, and we may hope that the earnest efforts which men are making to-day to improve the conditions of life will save the next generation from many of the evils that trouble us. At present, we are confronted with an alarming increase of nervous disorders and weaknesses, many of which rise from our transgression of the laws of right thinking and of right doing. Most of us are as well as we deserve to be. I mean by this that we are as well as our physical and moral habits will let us be. Reëducation is a kind of mental gymnastic. Just as an athlete can train a certain group of muscles to do his bidding, so we can train certain groups of thought, and cultivate certain healthful emotions until they dominate the mind and outgrow and overgrow the morbid tendencies which are doing us so much harm. Closely analogous to this psychic reëducation is what is known as motor reëducation. There is an organic nervous disease known as locomotor ataxia, which originates in a wasting of the spinal cord and manifests itself in a lack of harmonious action and coördination. This disease is generally admitted to be incurable. Up to a few years ago it could not even be alleviated, but now, thanks to the ingenuity of Doctor Fraenkel, it can be greatly relieved. The lesions of the cord, it is true, cannot be made good, but other motor centres can be trained to take the place of the injured part and to do its work, and the sufferer learns once more, by conscious attention and by painful effort, the art of coördination and of walking. Now in the realm of the mind we are able to set up a similar process by which mental obstructions and hindrances are taken away. A sense of

greater vigor and vitality is brought to the sufferer through the suppression of sad, morbid, debilitating thoughts. This process of soul-culture is also hard and painful, especially at first. It requires courage, patience and determined effort, but if we persevere we shall soon begin to reap a rich reward in health of mind and body. The easiest way to overcome depression and unendurable thought is by substituting for it healthful and happy thought."

As shocked as the public is over the prevalence of suicide, it would be immeasurably saddened at the revelation of the wide-spread suicidal impulse in weary lives, but no abnormal condition is more easily corrected than this. Numberless persons, thus obsessed, have confessed to shame at entertaining it, after a single half-hour's conference. When the impulse has gained rootage in the subconscious mind and is automatically prompting to the fatal plunge, a number of treatments are needed for cure, but virtuous response is certain, because, as Dr. Quackenbos[1] beautifully asserts "Each one of us may realize his own oversoul and its relationship to Deity and destiny. And the human being who apprehends that he is continuous with God and as cast in the image divine is measurably endowed with the attributes and powers of God—and that these powers are given him to run successfully an appointed career—that human being is incapable of all unmanly action, of fear, doubt, worry, distrust of his own adequacy, or of anger at the dispensations of Providence, but recognizes his supreme duty to be the intensifying of his spiritual life. He labors earnestly to transform his limitless capacities into practical achievement. He appreciates the act of living as the art of filling up every hour of life with beautiful thoughts and beautiful deeds." This is why the suicidal impulse that so readily suggests to the diseased soul relief from its miserable, neurotic, dys-

[1] Dr. Quackenbos, "Hypnotic Therapeutics," p. 97.

peptic, obsessed self, yields inevitably to earnest rational and spiritual educational methods. The cleric can, in this significant phase of therapeutic application, never be superseded by the physician. Moreover, the physician will ever need just such a trustworthy, psychologically educated clergy, to whom he can hand over cases that need such moralizing and Christianizing. And what gives the clergyman a unique position of helpfulness is that he represents an element of religious elucidation and correction the physician lays no claim to, and though a Christian man recognizes as being outside of his professional lines. Dr. Worcester recognizes this clerical equipment, but insists upon the necessary accompanying psychological equipment. His word is "All clerical, Emmanuel Movement workers believe in prayer, but prayer based on the conviction that he and his patients are in the presence of God, rather than that they are imploring an absentee Deity, who needs to be placated and may or may not incline His ear and lend His aid. His assurance is that God is a spirit and they that worship Him must worship Him in spirit and in truth. He is, moreover, convinced that when the human spirit is calm and impressionable and open to all good influences, that the divine spirit—the spirit of all goodness enters in and possesses the human consciousness and leads the weak and erring soul into all blessedness."

It is characteristic of this clerical treatment that each person applying for treatment bring the statement of a reputable physician as to his or her condition. Here are examples of physicians' diagnoses: "Dear Dr. ——— I am sending you a patient of mine, Mr. C., whom I hope you can greatly benefit. He has no organic condition of a pathologic nature and is physically all right. With best wishes for your success with Mr. C., I am, Sincerely yours, R. F. W." Here is another—"Dear Sir: Mr. C. W. Y.

is under my professional care, suffering from neurasthenia. He has no physical ailments and in my opinion he would be a proper case for psychotherapeutic treatment, and I trust that the Emmanuel Movement will enable him to regain his health. Sincerely, J. L. M." A third reads, "This will introduce to you Miss M. H., who is suffering and has been, for many months, with neurasthenia. Medical treatment, electricity and osteopathy have all failed to give my patient relief. She comes to you seeking health and I sincerely hope she may receive it. With good wishes, Yours truly, E. E. L., M. D." A fourth reads, "This is to certify that I have treated Mr. M. W. of this city, for a number of years, for various ailments. I am certain that his nervous condition is due to no organic change, but is purely functional. F. P. K., M. D." A fifth reads, "Dear Sir: You have my full consent to give Mrs. C. any relief in your power. W. M. D."

The following list taken from the published account of Dr. Worcester's work, who sees fifty appeals for help daily, and who conducts the best organized clinic in the United States for the relief of functional maladies, shows the extent of the work in a single year, seventy per cent of which are remedied, ranging from positive cure to acknowledged relief:

Alcoholism	44	Hypnagogic States	1
Arterio-Sclerosis	13	Insomnia	33
Constipation	3	Indigestion	14
Dementia Praecox	11	Kidney Affection	7
Depression	53	Locomotor Ataxia	10
Dipsomania	7	Migraine	7
Fear Neurosis	6	Manic Depressive Insanity	35
Fixed Ideas	2	Morphinism	7
Exophthalmic Goitre	8	Neurasthenia	189
Hysteria	23	Chronic Neurasthenia	19
Hemiplegia	2	Neurasthenia with Depression	16
Hypochondria	9	Congenital Neuropath	5

Insane, Unclassified	18	Senility	5
Occupation Neurosis	1	Unclassified	106
Osteo Arthritis	1	Spasm (functional)	6
Articular Arthritis	1	Lateral Sclerosis	1
Paranoea	1	Tumor	9
Polio-Myelitis Anterior	1	Reserved	39
Psychasthenia	38		

Dr. Worcester contends that this list does not include the many childish complaints, or the considerable number of patients who have been treated by various specialists outside the church at the request of the clinic and that in addition to these cases, which number 661, a large group of persons has come to the clinic from all over this country simply seeking moral and spiritual help or advice in regard to the conduct of life.

The means universally employed, is suggestion. Its application differs with the person administering it. Some practitioners avoid all technical allusion, such as reference to the specific malady, or the contrast between the conscious and subconscious minds. The practitioners, it is needless to say, avoid the use of hypnosis as an initiatory measure, inasmuch as it is only necessary to arouse the personality to the exercise of self-control and reliance upon the power inherent in the submerged depths. The Rev. Mr. Place,[1] of Waltham, Mass., claims that the real trouble in neurotic cases is an impairment of the coördinating faculty; that is, that there is a lack of self-control. "Self-control is to me," he exclaims, "the key to the whole situation. All the symptoms of functioning, nervous weakness of will, weakness of attention, inability, despairing fear, and so on, point to lack of self-control. To find the faults of character, to educate the will and to develop the coördinating faculty is a task which strikes at the roots of the whole subject. A few words about treatment. It seems to me, the conscious

[1] Rev. Chas. A. Place, "Psychotherapy," Vol. II, p. 83.

and subconscious minds are normally continuous. I have, therefore, aimed at the whole mind, seeking mastery of self and the total life of the individual. I have used explanation, education and encouragement, not suggestion in the technical sense, sleeping or waking. In some cases where the reasoning faculty appeared weak, some outside influence of power seemed necessary, especially where the mental disorder was very bad. But in all cases I have persisted in my faith that the human soul can be reached by moral and spiritual appeal and taught to come to mastery of its life." Rev. Mr. Powell,[1] of Northampton, Mass., reports this method of treatment: "The patient is submitted to a searching inquiry into every circumstance touching in any respect upon his mental or physical condition. The failure to reply with perfect frankness closes the discussion and makes treatment utterly impossible. Nothing is spared to secure the patient's confidence and to establish the closest spiritual relationship. Directions are given in regard to mental and spiritual hygiene and a course of reading is mapped out, and the daily reading of the books suggested have been the largest factors in the patient's forward march to health. Usually, however, after the discussion and the prescription of good books, the patient who is seated in the comfortable Morris chair before the fire, which, I take care by this time to have burning low, is taught by rhythmic breathing and by visual imagery to relax the muscles and is led into the silence of the quiet mind by tranquilizing suggestion. Then, in terms of the spirit, the power of the mind over the body is impressed upon the patient's consciousness and soothing suggestions are given for the relief of the special ills. The past year, seventy-five of the two hundred who have come to me, began to receive systematic treatment for neurasthenia, psychas-

[1] Rev. L. P. Powell, "Psychotherapy," Vol. 1, pp. 88 and 89.

thenia, false paralysis, hypochondria, melancholia, hysteria, insomnia, fixed ideas, morbid fears, suicidal tendencies, alcoholism, and other ills of soul, mind and body. On each subsequent visit, the treatment has logically followed the preceding one." Mr. Powell's[1] word to the nervously ill, is as follows: "Standing behind the Morris chair, my custom in ordinary neurasthenia is to begin the treatment in a gentle monotone, thus, 'You are now relaxed in body and suggestible in mind.' You are to allow your thoughts languidly to follow mine, expressed in words. You are not to question nor oppose. I shall say nothing which your mind will not at once accept and cherish. Your nerves are out of order, just because you have filled up your soul with things of less importance than the best. You have worried when you should have cast your care on Him, for He careth for you. You have yielded to small fears, forgetful that perfect love casteth out fear. In the silence of this quiet hour swing your centre out of self and put your fears and worries far away. Open wide the windows of your soul and let the spirit in of wholesoleness and love, of harmony and power. Believe the spirit will come in; wait for the incoming. And remember that 'they that wait on the Lord shall renew their strength. They shall mount up with wings as eagles. They shall run and not be weary. They shall walk and not faint.' Your special ills of mind and soul will disappear before the incoming spirit. They are going now. They are gone." Dr. Worcester's method is somewhat similar. His word is "I place the man in a comfortable, reclining chair, cut off the stream of sensation by darkening the room, and insuring quiet. Then I earnestly tell him that in a few moments he will be asleep. If he knows that hundreds of other persons have undergone

[1] Editor of Psychotherapy article in "Woman's Home Companion," April, 1909, p. 22.

this experience, he will be more certain to accept my assurance and obey the suggestion. A patient with palpitating heart comes to me. I soothe him with a few gentle and quiet words, and tell him that his nervousness is passing away and that his heart is beating quietly and regularly, and that in a few moments he will be calm and happy. He listens to me, believes me and the prediction is fulfilled."

My own method of operation is more diversified than these. It consists of three divisions of treatment, all of which are applied to every case, though varying in detail according to the temperament of the patient and the nature of the maladies treated. The person is placed in a reclining chair, while I sit in a chair in front of him three feet away, instead of standing behind him and stroking his forehead, as is generally the position of Dr. Worcester, Mr. Powell, and others. He is first instructed to close the eyes, as in prayer, not only because of the seriousness and devotionalism of the treatment, but for two specific reasons,—to shut out the distracting furnishings of the room and to suggest restfulness. I place myself in sympathetic relation with the person. I then order him to draw a very deep, slow breath, holding it a few moments, then letting it out slowly, and at the last quickly, that he may have the consciousness of the chest receding, the shoulders falling, arms and hands dropping prone and heavy, every part of the body relaxing, even to the stretching out of the legs so as to sit heavily in the chair. Quite a few minutes are spent in bidding the patient to become conscious of complete lassitude, without tension in the muscles or animation in the body, and with the mind a blank. Then I begin with mild and drowsy suggestions, bidding the person fall asleep, if possible. If he say he must keep awake to hear what is said, I assure him it is not at all necessary to hear or heed my words, inasmuch as the subconscious

mind is ever alert, and more so when the conscious mind is asleep, to catch the words and use them remedially. Each person needs to be assured that we are not working with the conscious mind at all, and that our endeavor is to side-track it completely by making it non-attentive. Then follow the gentler suggestions which often induce the desired unconsciousness and where sleep is not realized a relaxed condition so complete is attained that all conscious attention is nullified. These suggestions are: "Now you are settling down into rest. You are thinking about nothing; heeding nothing; not even catching the words I speak; you are passive through and through, thoroughly relaxed and receptive, heavy in the chair. Now I am talking to your subconscious mind; the depths of your being; the soul within you. Then addressing the subconscious mind, I remind it of its latent remedial energy, which I desire to arouse for the person's benefit. I remind it that it can assert itself against this malady and will, because it is not only possessed of much curative power, but also has control of the organs and activities of the body. I assure it of this fact by reminding it that during sleep the lungs breathe, the heart beats, the stomach digests, the liver secretes, the kidneys act, under its control, as during rational activity. I also remind it that it is incapable of guiding itself, and is not only dependent upon reason's promptings, but that it is willing to be commanded how to proceed in its remedial work and that it always strives to do the thing asked of it. My suggestions then partake of command and encouragement—'I command you to assert yourself to realize for this person these suggestions.' If troubled with indigestion, constipation, or insomnia, the command is 'Assert yourself for freedom from this limiting, distressing disturbance. Achieve normal functioning.' If the person has abnormal fears, I order it to break up those fears and

generate confidence, self-reliance and strength, giving these suggestions: 'I am losing my fears; I am gaining confidence; I am strong in the Lord. You will; you must destroy these fears and lend your strength to impart confidence.' Then follows encouragement: 'You can do this; you are the individual manifestation of the Universal mind. The limits of your latent reserve power have never yet been revealed. You are the power of God within this life. You cannot fail of achievement. God is interested in this case. He desires health for his children. This person is deeply interested in your success. I am both interested in and confident of success.' Such in the main expressed vividly and intensely, though expressed never twice alike, is the first part of the treatment."

The second part is quite different and of conscious, mental action. It is to ask the person, in this thoroughly relaxed state, to direct his mental energy upon different parts of the body, reminding him that he is to become intensely conscious of the part designated. I assure him that such thoughts directed as ordered is to flash curative thought on the part outlined, as is a flashlight directed on objects in the darkness. We generally start at the right shoulder and with his and my thought directed to the certain bodily part, sensation generally results. This is done partly to convince him of his power to dominate his body, partly to quicken the blood's circulation, when he often realizes tingling sensations or warmth in the parts concentrated upon. Then follows the treatment in some such statement as this: "See with your mental eye, the right shoulder. Follow that arm down slowly to the finger-tips. Follow down the left arm in the same way. Take the body at the neck. Follow it down slowly, flashing your attention upon the exterior of the body down to the waist, then down the right and left legs to the toes. Often exhila-

rating sensations are experienced. Then I order this mental energy turned up into the head where the brain cells are, which parts, through the projected thought, are illumined and strengthened in behalf of normal, healthful, cheering impressions from environment. If there be mental depression or headache, we jointly concentrate our mental energy upon that spot and the amazing effect is that the depression often lifts, the headache goes, sensations of peace and freedom from pain being realized. If pain be in arm or leg, or if indigestion or constipation be the bodily ailment, ready response to this energizing mental exercise is often realized."

The third part of the treatment is purely spiritual, preceded by such word as this: "While you are sitting there relaxed, remember that you are receptive to another presence than mine—namely, God's presence. God is a spirit and they that worship Him, must worship Him in spirit and in truth. Jesus said 'Where two or three are gathered together in my name, there am I in the midst.' The Eternal God is thy refuge and underneath are the everlasting arms. In Him we live and move and have our being. Say, therefore, to yourself, slowly, drowsily and with the consciousness that your life is passive and open in every part, 'I am now receptive to the presence of God. I am receptive to the Divine life energy. I am asking, therefore, I am receiving. His remedial life is just now entering in as I open to receive it. It is permeating me through and through, illuminating my mind, invigorating my spirit, banishing my fears, quieting my nerves, energizing my whole body. Every call of my body is responding to this inflow of the Divine life. His strength is being made perfect in my weakness. I am sharing the abundant life that Christ revealed. I am receiving of the Infinite source that makes me whole.' Then follows some minutes of quiet that these

meditations make their impression and become absorbed into the personality during which blessed calm I see the person in the spirit, as released from all ills. The person also is instructed to see himself identified with the spirit rather than with the body and its distressing sensations."

The reader will naturally ask how we can reconcile such diversity of treatment as different therapeutic workers practice with the remedy that all workers alike achieve. The answer to such an important and interesting question must be that it matters little what the form of treatment is. The important thing is to get the mind, or the soul, or the "vis medicatrix naturae" to express itself in keeping with the suggestions given, and for the remedying of the certain ills. The next important thing is to arouse the patient's confidence. The third important thing is to bring your own powerful and magnetic personality to bear upon the person's consciousness. I have in mind many cases of persons who afterwards told me that my statement that they had latent within them a submerged power that represented ninety per cent of their personality, which they were ignorant and unconscious of, while their weak and troubled self was only ten per cent of the whole, inspired a confidence that was curative. Further, that the statement that this mass of power was constantly working along the line of the suggestion, all unconscious to themselves, was the necessary incentive to new life. I recall a lady lecturer who came to me full of fear of failure each time she stood before her audience. After a few conferences, she said she was all right and more effective with her audiences than ever. In asking what accounted for the change, she said: "It was your statement that I had within me the strength of ten and did not know it." Then she said, "Whenever I arise to lecture, the thought comes automatically to my mind that I am speaking with the strength of ten. Before,

I was conscious of speaking with the strength of one, and that one my own, conscious self, weak and unequal to the task." Another, a clergyman, testified that his worries and fears of failures "in next Sunday's preaching" fled after I assured him that he had almost limitless reserves of power that he could draw on when he chose. This statement of Dr. Van Gieson's, that the "Subconscious mind is ninety per cent of our personality," may be demonstrated to be too large an assertion. Dr. Schofield's illustration that the rim of a coral island on the ocean's surface is as the conscious mind in relation to the subconscious, which, as the miles of island reaching to the ocean's bed, may be pure imagination, but until disproved both statements can be used effectively for remedial purposes, if the person treating and the person being treated believe them true.

In the meantime, let us observe that cures are being made without any such detailed treatment as outlined above. Dr. Edwin Ash of St. Mary's Hospital, London, has his patients simply concentrate attention on the area of pain, and through verbal suggestion sets, he claims, in action the natural curative powers of the patient's brain. The suggestions, he continues, may be assisted by a slight electrical stimulus. I always make passes while giving the suggestions of cure, if only to concentrate the person's mind more deeply on the experiment. Dr. Bernheim and Dr. Liebault, the founders of modern psychotherapy, immediately hypnotize the patient and give the suggestions, which they emphasize by placing a hand on the afflicted parts and call the conditions for psychical healing perfect, when the practitioner's reputation and appearance inspire confidence, allied with a sympathetic environment, and simple, trustful patients.

To show the reader, however, that it is the scientific principles used, rather than the practitioner's personality,

I may relate marvelous results achieved by a patient of mine, for her entire family. She knew not psychology, and had no insight into psychotherapy, other than that caught from our conferences. She was cured of awful head and eye-ache extending over a period of twenty-three years. For fourteen years, she had not read a book, nor written a letter, nor done sewing for herself and family. For the eighteen days from November 10th to November 28th, which was the day she came for treatment, she suffered headache from ten to twenty-four hours each day, six days of which were spent in bed with sick headache, with legs rigid, and the forearm purple to the finger-tips. She had tried every form of medical treatment, including a skilled oculist's experimentation, which necessitated the cutting of the cords of the eye. It was a long and stubborn case, but after four months, finally yielded to psychotherapy. But here is the amazing part of it: She has since then cured both of her seventy-year-old parents of insomnia, indigestion and nervous cough; her brother, a business-man, who had been for months in a sanitarium for mental depression, has been much helped, also her boy, so dull intellectually that, though sixteen years of age, was taken from school at the age of eight because he could not and would not study. In his case the treatments were given during sleep. Interest in reading has been stimulated and instead of becoming incensed when school was mentioned, he now calmly exclaims, "I would like to have an education."

Treatment in sleep is destined to become one of psychotherapy's most valued conditions for remedial work. The writer has met with no small reward in such practice with his own children. Fears of the dark have been uprooted. The use of bad words corrected. The most astonishing remedy of all and incredible to himself, had he not seen its application, has been this incident: My little boy of twelve

received for his newly-taken-up German an "F" mark each day for three months, which meant failure. The teacher, at last, complained bitterly of his indifference and emphasized the uselessness of continuing that study. I went to his bedside, reminded him of his poor work and assured him he could do as well in German as in his other studies, if he would. I commanded him to pay more attention to his German, to study it at home and at school, to show more respect to his teacher, and insisted that he get a "B" in his German, instead of so disgraceful a mark as "F." I did this two nights in succession, using not over four or five minutes in the conversation. To my surprise, he brought back, from the very next session of the school, an "A" in German. After three "A's," he dropped back to a "C," then "B's" and "A's" and received an average of "B" for the month of February, also, an average of "B" for the months of March and April. I asked him the day after the treatments how he happened to get such a good mark. His answer was, "I don't know, only I felt more like studying it. It seemed easier than it did at first. My teacher says it is not because I am such a good German scholar that she gives me good marks, but because I show more interest in my work." May I say that no amount of punishment nor of rational attempts at persuasion could have achieved this remarkable change in that little boy's studies. Punishment would have aroused his natural stubbornness; persuasion would have given him the chance he dearly loves to defend himself and argue the impossibility of learning the uninteresting stuff. The simple and easily-achieved putting of a new motive into the subconscious depths was the need, as the results show.

What psychotherapy's future is to be is problematical, only as to the destiny of its bounds, the systematizing of its rules of application, and the specifying of methods of

usage; as well as defining, possibly, the kind of person to be entrusted with the science with reference to which of the acknowledged professions he shall belong. True, much scientific definition is needed, also classification of the psychic forces employed, and the exact nature and power of the mind exercised in the remedial work. In the meantime, psychologists are turning more and more their attention to this new, open, even interminable field of research and experimentation and with the increasing assurance of a precious harvest of fruitage to reward their labors. The most orthodox and scientific psychology is not convinced, but both orthodoxy and science move slowly toward new truths and conclusions. Until a more far-reaching and consolidated mass of scholarly opinion sanctions this new field of knowledge and practice, for the skilled physicians' stock in trade, our humanity should deem itself blessed in the possession of such fearless, scientific, psychotherapeutic pioneers, as Liebault, Lloyd-Tuckey, Bramwell, Bernheim, Freud, Bleuler, Forel, Moll, Dubois and Schofield, in Europe, and Doctors Morton Prince, Weir Mitchell, J. J. Putnam, R. C. Cabot, Boris Sidis and Professors Peterson, Angell and Muensterberg in America.

PSYCHOLOGY IN ITS RELATIONS TO BIOLOGY

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There was a time when I agreed heartily with those who say, "What difference whether psychology be considered a part of biology or an independent science, should we not in either case work as we are working?" But recently an examination of my experience as teacher has convinced me of the incorrectness of this view. I note that within the past ten years, as a direct result of a radical alteration in my conception of the nature of psychology, I have almost completely changed the materials of my courses in the subject. What formerly I accepted as subject-matter of psychology and presented as such to my students, I now consider matter of neurology and general physiology; and, conversely, what I now deem the proper and important materials of psychology, I then either relegated to some branch of philosophy or ignored. This fact has sufficed to convince me, as no amount of theoretical discussion would have done, that one's conception of the materials, aims, and methods of his science is of profound practical importance in connection with both teaching and research. I wish, therefore, in the interests of what I consider to be a profitable view of the relations of psychology to biology, to report the results of a narrowly limited inquiry into the conceptions of psychology held by American biologists,

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to make a confession of faith, and to offer certain criticisms of psychology.

The aforesaid inquiry into the status of psychology in the minds of biologists was conducted primarily that I might learn whether the view which seems to me the best working conception is commonly held. Had my investigation proved it to be the dominant conception, I should not be writing this article.

Inasmuch as in this inquiry I prized quality of judgment above the number of opinions recorded, I sought the views of only a few individuals. To each of twenty eminently able and successful American biologists, of whom about one half are known to be predominantly morphological in their interests and the remainder physiological, I addressed the following questions: (1) Do you consider psychology a part of physiology? (2) If so, please define the term psychology so that I shall clearly understand what it includes.

At the time of writing I have received the replies of nineteen individuals. Of these replies four are non-committal, the writers frankly admitting that they have no reasonably satisfactory basis for an opinion; eight, with various qualifications, state that psychology is merely a part of physiology; and seven defend the view that it is an independent science, differing essentially in materials or methods, or both, from the biological sciences. Although it would add greatly to the interest and value of this discussion to publish the replies in full, I do not feel at liberty to do so, for the majority of my correspondents, in attempting to satisfy my request, felt keenly the limitations of their knowledge of psychology and expressed their views partly as a personal favor. In quoting from the opinions, I shall mention no names, but I wish to take this opportunity to express my appreciation of the kindness of my corre-

spondents. I shall preface a general statement of the results of my inquiry with quotations from the replies to my questions. These quotations present the three types of conception of psychology which appear to be prevalent among the biologists of this country.

First Type of Conception.—"In my opinion," writes a biologist whose interests are medical, "psychology is a part of physiology. In reaching this conclusion, I assume that psychology is an expression of the activity of the brain, modified, perhaps, in some instances, by ductless glands. I take a purely material view and hold that, except as a mere matter of convenience, the term 'psychology' will in time disappear. As our knowledge of the functions of the central nervous system increases, we shall probably recognize a thought, a sentiment, a feeling, as being as much a matter of routine physiological action of the corresponding cells of the brain as a muscular action is."

This, I need not remind the reader, is a naked statement of mechanical materialism in psychology. It assumes that consciousness is a form of energy, and claims that it can be studied scientifically only as energy. At this point we are not concerned with comments or criticisms.

Second Type of Conception.—A view widely removed from the materialistic is clearly presented by two of my correspondents, the one a morphologist, the other a physiologist. "I have always supposed"—thus the morphologist—"that, when considered from the standpoint of introspection, it (psychology) is a part of metaphysics, but when treated experimentally it is a branch of physiology." And the physiologist, after stating that "the application of scientific method to consciousness can go only so far as to explain the workings of the nervous mechanism," continues, "to my mind, there is beyond this (the above) a true and wholly distinct psychology—a study of the nature and

properties of consciousness independent of the nervous mechanism. The methods of science are applicable to matter and energy, but there is no warrant that they are applicable also to the study of consciousness. Most of the older biologists felt that they are not, and that consciousness must eventually be approached by methods that are extra-scientific, and that have not yet been developed. Such a psychology as this is to be born."

In each of these statements we have, it is to be noted, the recognition of a special branch of inquiry whose proper materials are psychological phenomena, and the denial of the possibility of applying the methods of natural science to these phenomena. Instead of contending, as do the materialists, that physiology can deal adequately with consciousness by studying neural processes, the advocates of this non-naturalistic psychology declare that, in spite of the fact that no such thing as consciousness exists for the natural sciences, we are compelled to admit the existence of psychical as contrasted with physical phenomena, and to grant that they may be studied in some way or other. Most interesting, in this conception of the nature and status of psychology, is the denial that a real science of psychology exists side by side with the physical and the biological sciences.

Third Type of Conception.—In order to present the third and last conception I have chosen, as in the previous instance, to quote from two of my correspondents who hold essentially differing varieties of the same conception. Both writers are physiologists. The one writes, "One has to recognize a fundamental distinction between the subject-matters of psychology and physiology. This is briefly that psychology deals with the subjective, physiology with the objective manifestations of living organisms. If psychology fails to gain insight into the nature of the phenomena of

consciousness, *qua consciousness,* then I conceive that it has failed in its object. Its central object is the psychic, and it is interested in the correlated (objective) organic processes only in so far as these throw light on the conditions of psychical phenomena—on their mode of action—supposing them to have any influence on physical processes or on the nature of the organism, of which consciousness, apparently, is one characteristic property or activity." And again, the other physiologist writes, "I am inclined to divide the processes in living things into two classes, and to distinguish two groups of sciences on that basis. Then I should say that physiology is the science which deals with material and energetic processes in living things, and psychology the science which deals with processes which are not material or energetic, that is, with the conscious processes."

This conception thus expressed evidently demands the development of a science which differs from the biological sciences. But before further considering the three types of conception, I shall offer certain general conclusions to which I have been led by a study of the replies to my questions and by reflection concerning the substance of discussions which I have had with many biologists.

The first of these conclusions is that the majority of American biologists either consciously and avowedly, or without realization of the fact, lack that definite knowledge of psychology which alone could entitle them to an opinion concerning the nature of the subject or its right to existence. This fact is not at all surprising in view of the recency of the introduction of experimental method in the study of consciousness, and the psychologist's regret over the state of affairs well may change to satisfaction when he hears that almost all of my correspondents disclaimed

fitness properly to answer my questions. To me, I must admit, this is the most encouraging result of my inquiry.

Secondly, I am forced to conclude that approximately half of our biologists, assuming that consciousness is a manifestation of energy, contend that there can be no real science of psychology apart from the physiology of the nervous system. The remainder hold that, although much that is commonly called psychology properly belongs to physiology, there is either an existent or a possible science of consciousness wholly independent of physiology. Finally, among the believers in an independent science of psychology there are those who hold that its methods are not those of the natural sciences, and those who believe that there now exists a flourishing science of consciousness whose methods are essentially the same as those employed by the physical and the biological sciences.

In the light of the above results of my investigation of opinion, I conclude that the establishment and promotion of psychology as a science among sciences places those who believe in its right to an independent existence the burden of convincing biologists, and natural scientists generally, of the logical and practical validity of their claim. This, I believe, can be accomplished best by works.

It is my contention that the three views of psychology presented in the quotations from my correspondents' replies —not to mention other views which do not happen to be popular with our biologists—are neither equally tenable from the logical standpoint nor equally profitable as working bases for the investigation of psychological phenomena, and I offer as my chief excuse for the publication of this paper the fact that I believe the rapid development of a real science of psychology depends largely upon the wholehearted and enthusiastic acceptance of some form of the third type of conception. I shall now present my chief

reasons for this belief. There is nothing original in what I am about to write; I have accepted a certain conception of psychology which is prevalent among psychologists, and I take this opportunity to say so.

My notion of the relation of psychology to the biological sciences will appear in the answers which I have to give to the questions: (1) Is the material of psychology essentially different from that of the physical and biological sciences? (2) Are the methods of natural science applicable in the study of consciousness? (3) Are the aims or purposes of psychology the same as those of the physical and biological sciences? and (4) Is the scientific investigation of consciousness, as such, worth while?

Natural science means, I take it, the systematic study of phenomena for the purpose of describing them, correlating them with other phenomena, discovering their laws, and explaining them causally. Each special science deals with a limited group of phenomena, which may conveniently be studied as a group. The grouping, however, is entirely artificial, and we must suppose that with the progress of investigation the special sciences will tend to coalesce, so that finally we shall have a general world science which shall deal with all phenomena of energy—the organic as well as the inorganic. I should like to be permitted throughout this discussion to refer to this composite of the physical and the biological sciences as "physics" in order to contrast it with what I wish to call "psychics." The pertinent question for us with respect to the general science of physics is, would it include psychology? Many American scientists, perhaps most of them, would answer in the affirmative, and for this very reason it seems to me worth while to set forth my reasons for believing that however far physics be developed, psychology will ever remain logically independent of it.

Accepting the common-sense view of the world, science regards objects now from the objective, now from the subjective point of view. The objective point of regard or attitude toward things is characteristic of physics; it deals with objects as existent "out there" in space and time and as relatively independent of the observer. The subjective attitude is characteristic of psychics; it deals with objects as existent in the consciousness of the observer. At the same moment an orange or the activity of a dog may be material of physics and of psychics. The whole world is viewed by the naive individual, as well as by the scientist, in these strikingly different ways. We may, if we like, refuse to accept the assumption of the physicist that his point of regard lends itself to scientific inquiry; and we may similarly deny that the psychological attitude toward objects furnishes a scientific approach to the world, but we simply cannot deny the existence of these two attitudes. Upon those who urge that the one or the other attitude should be ignored by scientists, or that the two should be fused and that things should be studied neither as independent existences nor as consciousness, must rest the duty of so directing the development of science as to provide a knowledge of the world which shall be more valuable than that provided by the physical and the psychical ways of viewing things. Logically it would appear that objects of investigation are neither wholly independent of nor wholly dependent upon the scientist, and that it is therefore profitable to approach them by as many paths—the physical and the psychical are only two of many possibilities—as we can discover. Above all else I am interested in the increase of our knowledge of phenomena—their characteristics, relations, etc.—and I believe that we shall progress most satisfactorily for the present by doing our best to apply the methods of exact science to objects

as physically and as psychically existent. If later we discover that either or both of these ways of viewing phenomena are unprofitable we can then turn to other approaches to reality. History indicates that it is not well for the scientist to concentrate his attention upon the task of discovering directly how things really exist. Instead it pays him to be satisfied temporarily with partial views of his objects.

I have answered the first question—Is the material of psychology essentially different from that of the physical and biological sciences?—by saying that it is not, and I have contended that physics and psychics examine the same objects from different points of view and with different attitudes toward their materials. This leads us to inquire, Can objects considered as consciousness be studied by the methods of the natural sciences?

Physics, by observation of its objects under natural and experimentally controlled conditions, strives to gain a description of its materials which is quantitatively accurate, which is verifiable, which forms a basis for the prediction of events, and which explains phenomena by revealing their causal relations. The recognition of these several important points with respect to scientific method raises the following questions concerning the methods of psychology.

Does psychology observe under natural and experimental conditions? Certainly. For fifty years the application of experimentation in the study of consciousness has progressed steadily, and there is no proof that the limit of its usefulness has been reached.

Does it strive for quantitatively accurate descriptions of its objects? We must reply, that only such descriptions satisfy those experimental psychologists who have made the greatest contributions of fact to their science. It has been said that the psychical object can not be measured,

that one of its prominent characteristics is its restriction to qualitative, as contrasted with quantitative, investigation; but, inasmuch as we constantly refer to psychological objects as greater or less, it seems that the rareness of accurate measurements in psychology is due rather to the observer's lack of skill than to the nature of his objects. At present it is customary to characterize and stigmatize the data of the psychical sciences as crudely inexact in comparison with those of the physical sciences. Unquestionably this is the case, but I wish to insist that it need not be true, and, further, that the responsibility for this condition of the science rests upon psychologists. We need ingenuity, insight, and persistent effort in order to discover ways of describing our objects with exactitude.

Does psychology present verifiable accounts of its objects? I answer, in essentially the same way as do the natural sciences, but less satisfactorily because of the inexactness of description; for verifiability depends upon the degree of quantitative accuracy with which an event has been studied as to its immediate characteristics and its relations. In all those regions of psychology which have been investigated with a reasonable degree of thoroughness and accuracy we discover verifiability of observations. In this respect, then, psychics differs from physics in its present status, not in its possibilities.

But the most important question remains to be answered, Does psychology explain phenomena causally? Not a few students of the psychical sciences seem to think that all causal explanations must come from physics, and that psychology is necessarily teleological instead of causal. With this view I must disagree, for an examination of the aims of both physics and psychics reveals the fact that there are two mediate goals: the accurate description of phenomena, and their explanation in causal terms. I contend that

causation is not limited to the physical sciences, but that from the psychological point of view, as well as from the physical, we observe a series of phenomena in which definite sequences are discoverable, and in terms of this apparently necessary arrangement of our objects we explain them. In physics this uniform relation of phenomena is called physical causation; in psychics it is called psychical causation. It is just as important scientifically from the one point of view as from the other. Comparative psychologists especially need to realize that they are not compelled to turn to physiology for explanations of their phenomena.

To sum up this rather dogmatic discussion of scientific method in psychology, I may say that I can discover no essential difference in the methods of the two groups of sciences which I have chosen to designate as physics and psychics. Both are observational, experimental, quantitative, causal in their explanations; both are in process of development, but in degree of development the psychical sciences are inferior to the physical sciences. Certain of the reasons for this state of affairs I shall attempt to indicate later in this paper.

The last two of the four questions concerning the relation of psychology to the biological sciences must be answered summarily.

Above I have stated that the aim of natural science is to give accurate descriptions of its objects, to correlate its phenomena, to discover their laws, and to explain everything causally. This, it seems to me, is the aim also of psychology. In fact this is the common aim of all the physical and psychical sciences.

Is the scientific investigation of consciousness, as such, worth while? Can we justify our attempts to observe objects from the psychological point of view? This is the kind of question no real scientist stops to ask after he has

once committed himself to the search for truth in some division of science. For he knows full well that our outlook is too limited to enable us to answer such queries wisely. No one of us can justify his researches in the eyes of all men, and fortunately none of us feels it necessary to do so. The study of consciousness is worth while, if we can achieve the goal of science.

The current American psychology of to-day is a dismal mixture of physiology and psychology. No wonder biologists are confused respecting the nature and status of the science; no wonder they question its right to the name science. To me it now appears of first importance that we should deal with psychological objects thoroughly, and in a rigorously scientific manner instead of devoting most of our time to premature attempts to correlate physiological and psychological phenomena. Even more distasteful to the natural scientist than the purest of speculative philosophy are these attempts of psychologists to picture the neural processes which parallel, or condition (according to the individual's conception of the relation of body and mind), psychological phenomena. Vague imaginings, mostly, are these "physiological explanations" of consciousness. I could quote *ad nauseam* from standard text-books of psychology in support of my contention that most of us know neither physiology nor psychology well enough to correlate satisfactorily the results of these sciences. I am deeply interested in physiological psychology, as well as in physiology and psychology, but I maintain that at present it is more important for science to advance our knowledge of bodily and mental processes than to speculate concerning their relations or to try to explain one set of phenomena in terms of the other.

For psychology and psychologists there are certain urgently important and intensely practical, albeit unpleas-

ant, facts which should be mentioned in connection with this discussion. I refer to the status of psychology in America, and to the reasons for the low esteem in which it is held by our physical scientists. Most scientists, whether they believe in a science of consciousness or not, admit that the present status of the subject is extremely unsatisfactory. As compared with even the newest of the physical sciences it appears crude, vague, inexact, unscientific. It is reasonable, therefore, that those of us who are professionally interested in the subject should seek to discover the causes of this state of affairs.

My study of the situation has led me to the conclusion that there are four preeminently important reasons for the sad plight of psychology. These are: (1) The lack of a generally and unquestioningly accepted body of presuppositions or postulates to serve as a working basis; (2) The lack of strong and research-impelling faith in the value of the aims of psychology and in the possibility of attaining these ends by available scientific methods; (3) The too-prevalent lack among empirical psychologists of thorough training in scientific as contrasted with philosophical method, and (4) The prevalence of poor teaching, and especially of the presentation of psychology as a collection of bizarre phenomena or as a philosophical discipline instead of as a science similar to the physical sciences in aims and methods. I shall briefly consider each of these four facts—for I am forced to admit that they are facts—with the hope that the frank recognition of undesirable conditions may be the first step toward improvement.

As to presuppositions, it is safe to say that few, if any, sciences are in worse plight than psychology. Progress in physics would cease should the investigator question the independent existence of his objects. Indeed, it takes but a superficial survey of the sciences to convince one that no

science can flourish until it has definitely accepted a body of presuppositions, and until it has ceased to question them so far as its practical problems are concerned. We recognize that it is impossible to prove the truth of certain of the physicist's most important assumptions, but we do not on that account contend that his descriptions and explanations of the world of objects and events are valueless.

Psychology can not work without assumptions or presuppositions, and it can not progress rapidly and steadily until a certain group of presuppositions has been definitely and heartily accepted by the great mass of its workers. It is not sufficient that an investigator here and there should adopt a working basis and then turn all his attention to the problems of his science. There must be union as a source of strength to the science. The study of the animal mind at this time stands forth as an instructive example of the effects of wrangling over assumptions instead of accepting the best that can be found, and then straightway going to work. Especially pertient at this point is a paragraph from a class report which was submitted to me recently by a student in an introductory course in comparative psychology. It reads, "A peculiarity of 'animal psychology' is that its expositors are still quarreling about its presuppositions. In most sciences the speculative bases are so widely accepted that workers in them, hearing no din of controversy, suppose those bases to be not speculative at all. For that reason expositors of other sciences may doubt the scientific status of 'animal psychology.' But it will be as scientific as any of the sciences, if ever its workers unite upon a criterion of the presence of consciousness. For the distinguishing mark of a science lies not in the selection of first principles, but in the care, and caution, and precision with which they are applied." I sincerely hope that my teachings are at least partly responsible for this opinion, for I believe

that it is the correct view, and I heartily wish that it were held by all psychologists.

The sad truth is that to-day psychology means very different things even to psychologists themselves. Already I have pointed out the fact that our biologists look upon the subject as a part of physiology, as a branch of metaphysics, as a possible science in which the methods of natural science are not applicable, or, as a genuine science of the subjective. Scarcely less divergent are the views of those who are really working in psychology. What can be expected of a subject thus hampered? Surely we may not hope for rapid and consistent progress until we have united whole-heartedly upon a working basis and a definition of the aims of our science.

Only less important than agreement as to presuppositions is the attitude of the psychologist toward his work. As a group we lack that strength of faith in our aims, methods, and ability which alone makes for success in research. We lack enthusiasm; we are divided; we waver in our aims; we mistrust our methods as well as our assumptions; we question the value of every step forward, and, as an inevitable result, our subject lags at the very threshold to the kingdom of the sciences. In a startling and illuminating way the biologists believe in their aims and methods. Those who fail because of lack of faith and enthusiasm are the exceptions in this domain. Of the physicists and the chemists the same is true. And of the value of this attitude toward one's work what further evidence is needed than the achievements of the physical and biological sciences.

To no small extent, in my opinion, our lack of faith and enthusiasm is due to the third of the conditions mentioned above, namely, our inadequate training for the tasks which we set ourselves. Psychologists generally have not been rigorously trained in the methods of the natural sciences;

yet, these methods—definite, precise, exacting—are now recognized by the masters among psychologists as the methods of psychology. Teachers and investigators, no less than students of the subject, come to their tasks—often to the research laboratory of experimental psychology—with keen interest in speculative philosophy and not infrequently with theoretical knowledge of scientific method, but of the practises of the exact sciences many of them know nothing from experience. A host of those of us who are known as psychologists simply do not know how to observe or to experiment with objects either physically or psychologically. I hold that it is absurdly inconsistent for us to expect psychology to develop scientifically so long as the majority of her workers are trained in metaphysics instead of in physics or psychics. Doubtless I should hasten to add that I respect both the methods and the results of speculative philosophy, and that I object merely to the use of the subject as a substitute for science of the naturalistic sort. I am convinced that philosophy does not give the training which the experimental psychologist needs. Surely it is well worth while for us to ponder the fact that every psychologist would give more for a single research student well trained in the physical and biological sciences than for a dozen skilled and able speculative philosophers.

Above I have insisted upon training in physics or biology as a preparation for work in psychology, but I should with equal willingness accept training in any science or sciences of the psychological group were they as highly developed on the side of method as are the physical sciences. The time may come when psychology itself will furnish as satisfactory training in scientific method as can now be gained in the physical sciences. But until that time has come, we should avail ourselves freely of the advantages which the physicists have won and generously place at our disposal.

Finally, I wish to call attention to the fact that the prevalent teaching of psychology is not such as to build up a conception of the subject as a science or to develop a strictly scientific attitude toward it. Because of diversity in point of view and vagueness and uncertainty as to aims and methods in the minds of those of us who teach it, psychology is, as a rule, presented to elementary students quite unsystematically and unscientifically. Talk with almost any one who has taken only an introductory course in psychology in a college or normal school and the fact will appear that the subject means to the individual either a curious hodge-podge of more or less bizarre and mysterious phenomena or a study of the brain and certain of its functions! Whether it is worse to consider the subject as the study of hypnotism, thought transference, spiritualistic phenomena, delusions, illusions, and dreams, or as the study of brain processes, I leave it to any one who is interested to decide. For my part, I am content to do everything in my power to replace both of these conceptions of the subject by the one to the exposition of which this paper is devoted. It is indeed a serious admission, that of psychology as the systematic and persistent attempt to describe and explain the facts of consciousness the average student has no notion. There is something radically wrong, for even an elementary course should give each student a definite idea of the chief characteristics of the materials of psychology, of its aims, of its methods, and of its principal achievements.

WHAT SOCIAL OBJECTS MUST PSYCHOLOGY PRESUPPOSE?

BY GEORGE H. MEAD

(University of Chicago)

Given at the meeting of the Psychological Association in Boston, Dec. 31, 1909.

There is a persistent tendency among present-day psychologists to use consciousness as the older rationalistic psychology used the soul. It is spoken of as something that appears at a certain point, it is a something into which the object of knowledge in some sense enters from without. It is conceived to have certain functions—in the place of faculties. It is as completely separated from the physical body by the doctrine of parallelism as the metaphysical body was separated from the metaphysical soul by their opposite qualities.

Functional psychology has set itself the program of assimilating the purposive character of conscious processes—or of consciousness as it is termed—to the evolutionary conception of adaptation, but instead of making consciousness in human individuals a particular expression of a great process, as is demanded of a philosophy of nature, it comes in generally as a new and peculiar factor which even demands a new formula of evolution for its explanation; it involves a new evolution superinduced upon the old.

In spite of much philosophizing, consciousness is identified in current psychological practise with the field which is open to introspection, and the object of knowledge is

placed within this field, and related to the physical world—spoken of as an external field of reality—by a parallelistic series. This psychological practise tends to accept the conceptual objects of science, the atoms, molecules, ether vortex rings, ions, and electrons, as the substantial realities of the physical world, and, by implication at least, to relegate the sensuous content of objects of direct physical experience to this separate field of consciousness. The old-fashioned idealist has then only to point out the thought structure of these hypothetical objects of science to sweep triumphantly, with one stroke of his wand, the whole world of nature within this limited field of the consciousness open to introspection. Whereupon the solipsistic spook arises again to reduce one's world to a nutshell.

The way out of these crude psychological conceptions, in my mind, lies in the recognition that psychical consciousness is a particular phase in development of reality, not an islanded phase of reality connected with the rest of it by a one to one relationship of parallel series. This point of view I have elsewhere developed somewhat obscurely and ineffectually, I am afraid.

What I wish to call to your attention in the few moments at my disposal, is another phase of this situation which is itself psychological in its character; the presupposition of selves as already in existence before the peculiar phase of consciousness can arise, which psychology studies.

Most of us admit the reality of the objects of direct physical experience until we are too deeply entangled in our psychological analyses of cognition. Unless we subject ourselves to the third degree of criticism, the parallelism of which we speak lies between the processes of brain tissues which can be seen and smelt and handled and the states of consciousness which are conditioned by them. While this admission guarantees the physical bodies of our

fellows as equally real, the self is relegated to the restricted field of introspected consciousness and enjoys not the reality of a so-called external object, but only that of a combination of states of consciousness. Into the existence of those states of consciousness in another, we are solemnly told we can only inferentially enter by a process of analogy from the relations of our own introspected states and the movements of our bodies to the movements of other bodies and the hypothetical conscious states that should accompany them. If we approach the self from within, our analysis recognizes, to be sure, its close relationship to, if not its identity with, the organization of consciousness, especially as seen in conation, in apperception, in voluntary attention, in conduct, but what can be isolated as self-consciousness as such reduces to a peculiar feeling of intimacy in certain conscious states, and the self gathers, for some unexplained reason, about a core of certain vague and seemingly unimportant organic sensations—a feeling of contraction in the brow, or in the throat, or goes out to the muscular innervations all over the body which are not involved directly in what we are doing or perceiving. And yet when we proceed introspectively the whole field of consciousness is ascribed to this self, for it is only in so far as we are self-conscious that we can introspect at all.

But what I wish to emphasize is that the other selves disappear as given realities even when we are willing to admit the real objects of physical experience. The self arises within the introspected field. It has no existence outside that introspected field, and other selves are only projects and ejects of that field. Each self is an island, and each self is sure only of its own island, for who knows what mirages may arise above this analogical sea.

It is fair to assume that if we had exact social sciences which could define persons precisely and determine the

laws of social change with mathematical exactness, we should accept selves, as there, in the same sense in which we accept physical objects. They would be guaranteed by their sciences. For in the practise of thought, we are as convinced as the Greeks that exact knowledge assures the existence of the object of knowledge.

It is evident that the assumption of the self as given by social science in advance of introspection would materially and fundamentally affect our psychological practise. Consciousness as present in selves would be given as there, outside the field of introspection. Psychological science would have to presuppose selves as the precondition of consciousness in individuals just as it presupposes nervous systems and vascular changes. In actual psychological analysis we should condition the existence and process of states and streams of consciousness upon the normal presence and functioning of these selves, as we condition the appearance and functioning of consciousness upon the normal structure and operation of the physical mechanism, that our psychology presupposes.

In a manner we do this in treatises on mob-psychology, in such a treatise on social psychology as that of Cooley's "Human Nature and the Social Order." McDougall's "Social Psychology" prepares the way for it in carrying back the processes of consciousness to social impulses and instincts—to those terms in which, somewhat vaguely, selves are stated in an evolutionary theory of society.

The economic man of the dismal science was an attempt to state the self in terms of an objective and exact social science. But fortunately the economic man has proved spurious. He does not exist. The economic man is as little guaranteed by the orthodox political economy, as *realia* were by the metaphysics of scholasticism.

Social science in anthropology, in sociology pure and

impure, dynamic and static, has not as yet found its scientific method. It is not able to satisfactorily define its objects, nor to formulate their laws of change and development. Until the social sciences are able to state the social individual in terms of social processes, as the physical sciences define their objects in terms of physical change, they will not have risen to the point at which they can force their object upon an introspective psychology. We can to-day foresee the possibility of this. Eugenics, education, even political and economic sciences, pass beyond the phase of description and look toward the formation of the social object. We recognize that we control the conditions which determine the individual. His errors and short-comings can be conceivably corrected. His misery may be eliminated. His mental and moral defects corrected. His heredity, social and physical, may be perfected. His very moral self-consciousness through normal and healthful social conduct, through adequate consciousness of his relations to others, may be constituted and established. But without awaiting the development of the social sciences it is possible to indicate in the nature of the consciousness which psychology itself analyzes, the presupposition of social objects, whose objective reality is a condition of the consciousness of self.

The contribution that I wish to suggest toward the recognition of the given character of other selves is from psychology itself, and arises out of the psychological theory of the origin of language and its relation to meaning.

This theory, as you know, has been considerably advanced by Wundt's formulation of the relation of language to gesture. From this point of view language in its earliest form comes under that group of movements which, since Darwin, have been called expressions of the emotions. They fall into classes which have been regarded as without

essential connection. Either they are elements—mainly preparatory—beginnings of acts—social acts, *i. e.*, actions and reactions which arise under the stimulation of other individuals, such as clenching the fists, grinding the teeth, assuming an attitude of defense—or else they are regarded as outflows of nervous energy which sluice off the nervous excitement or reinforce and prepare indirectly for action. Such gestures, if we may use the term in this generalized sense, act as stimuli to other forms which are already under social stimulation.

The phase of the subject which has not been sufficiently emphasized is the value which these truncated acts, these beginnings of inhibited movements, these gestures, have as appropriate stimulations for the conduct of other individuals. Inevitably, forms that act and react to and upon each other come to prepare for each other's reaction by the early movements in the act. The preliminaries of a dog or cock fight amply illustrate the sensitiveness of such individuals to the earliest perceptible indications of coming acts. To a large degree forms, which live in groups or in the relation of the animals of prey and those they prey upon, act upon these first signs of oncoming acts. All gestures, to whatever class they belong, whether they are the beginnings of the outgoing act itself or are only indications of the attitude and nervous tension which these acts involve, have this value of stimulating forms, socially organized, to reactions appropriate to the attack, or flight, or wooing, or suckling, of another form. Illustrations are to be found in human conduct, in such situations as fencing, where one combatant without reflection makes his parry from the direction of the eye and the infinitesimal change of attitude which are the prelude to the thrust.

Gestures then are already significant in the sense that they are stimuli to performed reactions, before they come

to have significance of conscious meaning. Allow me to emphasize further the value of attitudes and the indications of organized preparation for conduct, especially in the change of the muscles of the countenance, the altered breathing, the quivering of tense muscles, the evidence of circulatory changes, in such minutely adapted social groups, because among these socially significant innervations will be found all these queer organic sensations about which the consciousness of the self is supposed to gather as a core.

Human conduct is distinguished primarily from animal conduct by that increase in inhibition which is an essential phase of voluntary attention, and increased inhibition means an increase in gesture in the signs of activities which are not carried out; in the assumptions of attitudes whose values in conduct fail to get complete expression. If we recognize language as a differentiation of gesture, the conduct of no other form can compare with that of man in the abundance of gesture.

The fundamental importance of gesture lies in the development of the consciousness of meaning—in reflective consciousness. As long as one individual responds simply to the gesture of another by the appropriate response, there is no necessary consciousness of meaning. The situation is still on a level of that of two growling dogs walking around each other, with tense limbs, bristly hair, and uncovered teeth. It is not until an image arises of the response, which the gesture of one form will bring out in another, that a consciousness of meaning can attach to his own gesture. The meaning can appear only in imagining the consequence of the gesture. To cry out in fear is an immediate instinctive act, but to scream with an image of another individual turning an attentive ear, taking on a sympathetic expression and an attitude of coming to help,

is at least a favorable condition for the development of a consciousness of meaning.

Of course the mere influence of the image, stimulating to reaction, has no more meaning value than the effect of an external stimulus, but in this converse of gestures there is also a consciousness of attitude, of readiness to act in the manner which the gesture implies. In the instance given the cry is part of the attitude of flight. The cry calls out the image of a friendly individual. This image is not merely a stimulus to run toward the friend, but is merged in the consciousness of inhibited flight. If meaning is consciousness of attitude, as Dewey, Royce, and Angell among others maintain, then consciousness of meaning arose only when some gesture that was part of an inhibited act itself called up the image of the gesture of another individual. Then the image of the gesture means the inhibited act to which the first gesture belonged. In a word, the response to the cry has the meaning of inhibited flight.

One's own gestures could not take on meaning directly. The gestures aroused by them in others would be that upon which attention is centered. And these gestures become identified with the content of one's own emotion and attitude. It is only through the response that consciousness of meaning appears, a response which involves the consciousness of another self as the presupposition of the meaning in one's own attitude. Other selves in a social environment logically antedate the consciousness of self which introspection analyzes. They must be admitted as there, as given, in the same sense in which psychology accepts the given reality of physical organisms as a condition of individual consciousness.

The importance for psychology of this recognition of others, if thus bound up with the psychology of meaning, may need another word of emphasis. Consciousness could

no longer be regarded as an island to be studied through parallel relations with neuroses. It would be approached as experience which is socially as well as physically determined. Introspective self-consciousness would be recognized as a subjective phase, and this subjective phase could no longer be regarded as the source out of which the experience arose. Objective consciousness of selves must precede subjective consciousness, and must continually condition it, if consciousness of meaning itself presupposes the selves as there. Subjective self-consciousness must appear *within* experience, must have a function in the development of that experience, and must be studied from the point of view of that function, not as that in which self-consciousness arises and by which through analogical bridges and self-projections we slowly construct a hypothetically objective social world in which to live. Furthermore, meaning in the light of this recognition has its reference not to agglomerations of states of subjective consciousness, but to objects in a socially conditioned experience. When in the process revealed by introspection we reach the concept of self, we have attained an attitude which we assume not toward our inner feelings, but toward other individuals whose reality was implied even in the inhibitions and reorganizations which characterize this inner consciousness.

If we may assume, then, that meaning is consciousness of attitude, I would challenge any one to show an adequate motive for directing attention toward one's attitudes, in a consciousness of things that were merely physical; neither control over sense-perception nor over response would be directly forwarded by attention directed toward a consciousness of readiness to act in a given situation. It is only in the social situation of converse that these gestures, and the attitudes they express could become the object of attention and interest. Whatever our theory may be as to

the history of things, social consciousness must antedate physical consciousness. A more correct statement would be that experience in its original form became reflective in the recognition of selves, and only gradually was there differentiated a reflective experience of things which were purely physical.

THE PROBLEM AND CONTENT OF EDUCATIONAL PSYCHOLOGY

BY IRVING KING

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In recent years the problem as well as the content of educational psychology has increased very greatly in complexity. This is partly because the science of psychology itself has been rapidly gaining in both scope and intent until every conceivable aspect of animal behavior as well as of human conscious life has come to be regarded as falling within its legitimate sphere of investigation. Hence it has come to pass that the one who has the planning of psychological material for those preparing to teach is embarrassed by a wealth of material, all of which seems to have more or less definite value for the purpose in hand. The main problem thus seems to be one of selection of the best from among much that is good, for it is clear that there is not time to teach everything. What, then, are the phases of this rapidly developing science which are most valuable for the training of the teacher, and according to what standard shall they be selected?

The problem we are facing, however, is not merely one of selecting from a complex science the elements that may be of value for some particular purpose. It is even more that of determining clearly a dominant view-point and the laying down of the lines for, and the development of, a new science.

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It is interesting to reflect that one or at most two decades ago the problem of an educational psychology hardly existed. At least it had not gained a place at the focus of attention. It was thought at that time, as it had been thought for years, that any account of mental structures and functions, no matter how abstract it might be, if it were true, would meet the need of the teacher for a psychological training. Just because the teacher, *par excellence,* had to deal with minds, he must, perforce, know the science of the mind. We of to-day do not depreciate in any way this general descriptive science, but we doubt if it is of any more significance for those who are engaged in teaching than for those in other professions. If it is worth while, from the standpoint of general culture, to have a certain amount of scientific training, presumably psychology has as good a right as any other science to a place in the student's program. But as we have suggested, this general science has no preeminent claim upon the teaching profession. It is becoming more and more apparent that it is a science that touches in some way all phases of human activity and is concerned in all types of vocations.

With the recognition of this broad, general relation between psychology and many different callings, arose also the recognition of the possibility of a much more intimate relation between the facts of the science and practical problems than had been imagined when teachers were first advised to study psychology just because of its being mental science. It was seen, in other words, that the solution of practical problems in every vocation depends in large measure upon an accurate understanding of all the factors involved. Hence the teacher must be interested in the facts furnished by the science of psychology in so far as these facts help in the interpretation and control of situations

and assist in the proper meeting of such difficulties as arise in the work of teaching.

At first, however, the *character* of this need was only imperfectly appreciated and the first attempts to meet it were through a more or less uncritical selection and superficial discussion of certain aspects of psychology such as attention, perception, memory, imagination, etc., and by tacking to them pedagogical applications of various sorts. Münsterberg well describes it as a cramming of some psychological laws to which was added an appendix of moral appeals. The outcome of the process was usually a very unreliable psychology and a sort of disjointed rule-of-thumb pedagogy.

At this point the continuity of the development of an educational psychology was broken. The next step, logically, would have been to work out a psychology of the educative process, or a discussion of the fundamental characteristics of the educative process with reference to the psychical factors involved in it. What should next have developed, in other words, should have been an organic union of aims and means to take the place of the unilluminating scrap-heap type of educational psychology that had first arisen. Certainly the value of descriptive psychology for the teacher did not end with this piecemeal application, and yet this is practically where it stands to-day. The reason for this is that attention has largely been turned in another direction, namely, toward the experimental investigation of various problems which have more or less educational interest and yet are sufficiently psychological to claim the attention of those psychologists of somewhat definite pedagogical bent. The development of experimental methods, particularly in psychology, has furnished a technique for attacking many problems having a practical bearing for the educator as well as those having a relation

to the pure science of the psychologist. In many cases, the motive prompting the investigations has been rather that of the pure scientist even when it has been recognized that the results might play into the hands of the educational theorist.

Thus, in one way or another, an extensive field for experimental research in education has been opened up, in part quite definitely psychological and in part only remotely so, but in most cases full of general human interest. In fact, the enthusiasm of many students has been so great that they have been ready to regard the data afforded by the researches in this field as constituting the only *real* educational psychology. For ourselves, however, we cannot escape the feeling that the field of experimental education as thus far developed belongs essentially to the advanced student. The beginner in education needs a more organized account of the fundamental relations of psychology and teaching. He has definite and practical situations to face and these should furnish the starting-point of a genuinely scientific inquiry, which, although dealing with psychical processes and factors, is first and last concerned with educational rather than with psychological problems.

We repeat, then, that it is not mere descriptive psychology that the prospective teacher needs at this point, even though it be of the excellent type represented by James, Angell, Judd, or Royce, or, rather, his needs pass beyond that which these books afford. Nor is he ready, after having studied the descriptive science, to undertake experimental researches in educational psychology. For one thing, he has not as yet a sufficient appreciation of the problems of education to undertake such work with profit. He should understand certain general principles of the psychology of education before undertaking experimental work, just as the experimental psychologist must, to start

with, have certain general notions of psychical contents, relations, processes and problems, for only thus can he appreciate the questions that lie before him as an experimentalist.

Experimental education is not, then, in a position to meet the need of the prospective teacher who has just finished his course in general descriptive psychology. Some of its problems have, it is true, grown directly out of school work, and their solution may have an important influence upon educational theory and practise. But, in the case of many of the questions, the impelling motive has been that of pure science and their bearing upon the actual conduct of school work is at best very remote. Important as is the field of experimental educational psychology, it is then preeminently the field for the research student rather than for the novice. Not that the novice may not profitably take up experimental work, but rather that this is a specialized field in which the average person who prepares to teach is not, and need not be, concerned to enter. And yet, as we have said, there has been a tendency on the part of many to limit the field of educational psychology to this sphere, a sphere in which the objects of research are unquestionably derived from education, but in which the interest is that of the pure scientist rather than of the practical teacher.

These then seem to be the alternatives before the prospective teacher at the present time, either general descriptive psychology with no attempt at applying it to his special problem, or a hodge-podge of psychological lore with certain supposed "applications," or, lastly, experimental education. The first and last of these are respectable and legitimate subject-matters, the second no respectable scientist cares to own, a bastard child, as it were. And yet, as we have said, the actual needs of the prospective teacher are met by neither one of these perfectly respectable

sciences. Neither one furnishes the specific information for the controlling of practise that a genuine applied science is supposed to afford.

This brings us definitely to the question as to whether there is not an as yet undeveloped science of psychology as related to teaching, a science which will not be a mere jumble of extracts with pedagogical applications attached, but rather a real applied science, with a recognizedly educational point of view and definitely determined problems which are primarily educational and yet which can be coped with best by a study of the psychological factors involved in them. Such an applied science would stand upon its own feet because it would have a unity of its own, its own peculiar problems, its own peculiar stratification and lines of cleavage. Psychological fact appears in it, not merely as psychological fact, but with reference to its throwing light upon educational problems. It presupposes in the student, however, a general knowledge of these psychological facts. It goes without saying that such knowledge is a pre-requisite to getting any light upon the educational problem through these facts. It may be that the candidate for a course in educational psychology does not know much about the general science. But just because his preparation for the applied science is defective is no excuse for calling that educational psychology which must be given him to remedy his defect. It may be necessary for the teacher of educational psychology to stop and teach some general psychology, that he may have in his class the basis on which to prosecute his educational inquiry. But when he is doing this he is not teaching educational psychology, he is rather losing time from what he is supposed to do because of the inadequate preparation of his students for that which they should be able to do when they come to him.

It has been with reference to such things as have been

enumerated in the paper thus far that the present writer has for several years been gradually working out what seems to him to be a real psychology of education that is not a mere rehash of the conclusions of the general science. Neither is it experimental education, good and proper as that surely is. It rather attempts a systematic account of the educative process in the light of such elementary psychological facts as bear an important relation to controlling it and hence rendering it more effective. The attempt has been to start from some definitely educational point of view, to lay down certain fundamental educational axioms, concepts, or problems, and to investigate them in the light of the psychical processes that are involved in them.

The fundamental axiom, or concept, is that an educative process is essentially one involving change of some sort or, more specifically, growth. The nature and implications of growth as contrasted with mere mechanical accretion are first discussed and applied to learning. The centralizing principle thus becomes the learning process as a special phase of growth.

It is freely admitted that this point of view may be too narrow to include all the facts that should belong to an educational psychology. But, on the other hand, it is doubtful if any single point of view can be found which will comprehend all the complexity of the educational process, and this one is sufficiently inclusive for practical purposes. In the process of learning, in its various aspects, we have certainly the central fact of education. It is a process which needs to be studied from many different angles, and especially from that which reveals the way in which and the extent to which it is conditioned by psychical processes, structures, and laws.

In the course as worked out from this basis, the main lines of classification and the most important concepts are,

as it has been suggested they should be, primarily educational rather than psychological. Consequently we do not, after this introductory discussion of growth, become immersed in the psychology of sensation as the basis of all knowledge. In fact, to the present writer, it seems very doubtful whether an educational psychology need have anything to say of sensation or of perception as such. The next topic treated is activity or impulse. It is pointed out that growth always presupposes an inner activity of some sort. That which is entirely inert cannot grow. Hence the fact that the learner is active, impulsive, is of the utmost significance in any account that may be taken of the learning process. That impulse is an essential characteristic of all organisms from the lowest to the highest is brought out and illustrated in many ways. In the lower forms and in the human infant it appears as mere restlessness, without purpose or content. In higher forms it becomes, in addition to this, desire and even "rational eagerness." We next emphasize the general importance as a prior active attitude for the apprehension of any and all new experience. Impulse is at first, moreover, entirely without *content*, that is, mere tendency to move without objective or accompanying consciousness of meaning. But the mere expression of impulse results in its acquiring some sort of more or less definite content. The suggestion is offered and developed in the course that the rich content of adult mental life is definitely related to and in fact is the outcome of the impulsive, projective attitude which every organism assumes toward its environment. Impulse thus appears to be the initial point in all learning. There must be some movement or initiative on the part of the child before he can be taught. Impulses are not to be crushed out as bad nor permitted to run riot on the supposition that they are good. They are merely the raw material of

character, potentialities to be utilized. They do not cease to exist when organized into character, however, for our psychic life is always active, always reaching out, always projective. The character of the adult may differ in many ways from that of the child, but as far as impulse is concerned it differs simply in that it has content and is organized along more or less definite lines.

This phase has been worked out in varying detail according to the class, but in any case the object is to impress as clearly as possible upon the class that the learning process is one of active appropriation rather than of passive absorption.

We next discuss certain conditions which may be regarded of primary significance in calling forth impulse, conditions which are therefore favorable to learning. Two types of conditions are distinguished, representing two suggestive angles from which to view the process of mental growth. In the first there is the social atmosphere, for the learning process is one which involves in many of its aspects the interaction of minds, is, in other words, a social process. The other vitally important condition of learning is that it shall have motive or purpose, and this aspect of the subject is discussed under the heading of the problem.

With reference to the first of these fundamental conditions, that of the social atmosphere, the idea is presented that educational psychology is in large measure social psychology of a certain type. It is conceivable that learning might go on in a social vacuum, that is, be a purely individualistic affair, but the point is made that learning as far as it appears in school, as far as the teacher is concerned in it, is influenced in very important ways by the presence of other people. The attempt is made to carry this social view-point throughout the course, keeping in mind, for example, that interest, attention, memory, reason-

ing, and so forth, seldom develop in their recognizedly characteristic ways except under some sort of social stimulation. In other words, it seems best to let the social point of view be present more or less continuously rather than to divide the course into two parts, one dealing with the social and the other with the individualistic aspects of learning. At this point, however, the most general aspects of the social character of learning are discussed with reference to making clear the presuppositions of what follows.

The relation of the problem to learning activity is next considered in a preliminary way. It is not of course supposed that all learning is conditioned by the presence in consciousness of some definite problem, the idea is simply that this is a significant point from which to view many different types of learning. In this discussion it is first necessary to broaden the concept of the *problem* that is apt to be in the minds of most of the class. Many illustrations are given drawn from all the different types of school studies as well as from life outside the school. Such topics as these are considered, the conditions under which problems arise, their relation to impulse and to the development of mental content in general, the function of the teacher with reference to the pupil's questions and their solution, for instance, can the teacher take an active part in awakening the pupil to a consciousness of problems and in helping him to solve them, and the results continue to be educative in the best sense, the relation of the higher forms of social influence to the origin and solution of purposes or things for which one may work?

In the remainder of the course the attention is fixed upon the learning, or more specifically the problem-solving activity, with the object of determining the organization of and place within it of various psychical processes. Thus interest and effort are seen to fall naturally together in the

solution of a genuine problem; attention stands for the organization of the self in the face of a difficulty of some sort. The different types of attention stand for successively more and more complex organizations of the self about matters which appeal to it as affording avenues of genuine self-expression. Spontaneous attention is not intrinsically different from or lower than the voluntary or reflective type. The former is simply the expression of a more primitive or instinctive self than the latter. The attention is to be developed by the development of the self with a capacity for appreciating and grappling with many different types of purposes and problems. Attention means organization of the self, and this occurs most characteristically when one faces a problem that is for him genuine.

The next subject taken up is that of the extent and ways in which the predisposition of the psychophysical organism is operative in the learning activity. The various facts which belong to the psychology of habit, of apperception, of association and memory, contribute largely to the development of this phase of the subject. In many concrete ways we attempt to show how that which one does at any time is conditioned by his previous activities which hold over in the form of various motor co-ordinations, how new acts of skill are based very definitely upon previous accomplishments. This same fact of predisposition holds as truly in the sphere of feeling and ideation, and the influence of past ideas and modes of thought upon present purposes and problems is fully illustrated. If apperception is to be regarded as an assimilative activity and not merely mental predisposition, it is shown that this assimilation actually takes place more characteristically and effectively when it is motivated in some way than if it is made to depend upon old ideas which are supposedly similar to the facts which are to be taught. Only as old experiences become

problematic or discrepant do they become very active in the assimilation of the new.

As far as association and memory are concerned the general nature of the mechanism and of the primary laws is presupposed. The educator is not directly concerned with them, at least with them in the form in which they are presented in most psychologies. Mental events will be bound together in some way or other, whether the teacher thinks about it or not. That there will be some sort of associative connections goes without saying. The teacher's problem is to influence in some measure the *kinds* of connections that are to be established. These are not so much bare connections of idea with idea as more or less complicated systems of mental elements. The question is, then, as to how the most useful systems can be built up, that is, systems which will render past experiences the most thoroughly available for present needs. This systematization will be affected not so much by mere mechanical juxtaposition or by infusing a little pleasure into the union, as by using ideas together in the working out of purposes or in the solving of problems. In other words a teacher is not so much concerned with the fact that ideas do cohere as with the question of how to secure the most useful modes of coherence. He is not so much interested in the fact that two ideas may be associated by contiguity or by similarity as in the fact that a problem or purpose furnishes a dynamic center about which the simpler portions of experience may cluster and acquire indissoluble connections.

This in like manner is seen to be the condition of effective memory, of discrimination, of concept-formation, of judgment, and of reasoning. The limits of a brief paper forbid a detailed statement of this latter portion of the course. In fact, only the barest outlines of any of it have been given and it is not likely that such a schematic state-

ment can prove entirely convincing. It can only be said in conclusion that the main objective of the course is to get old psychological facts from a new angle, such a one as will enable the student to determine which facts are really significant for the control of the educative process. As it has actually been worked out and tried with many classes the writer does not feel that it should be subjected to the criticism of being scrappy or of being a mere rehash of the general science of psychology. The ever-present educational problem gives opportunity for an organized and unified as well as for an entirely fresh treatment.

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Yale, Edward G. Bourne; Arthur T. Hadley; T. R. Lounsbury; Geo. T. Ladd.
Washington, John W. Foster; Wm. T. Harris (Comm. Education); W. J. McGee.
Wisconsin, Richard T. Ely; Balthasar H. Meyer; Paul S. Reinsch.

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Periods and Events of History

GREEKS.

B. C.	
492-449	The Persian Wars.
460-430	The Age of Pericles.
431-359	Rivalry of Sparta, Athens and Thebes.
359-336	Philip of Macedon and Demosthenes.
336-323	The Age of Alexander.
323-146	Conversion of Greece and the Greek Kingdom into Roman provinces.

ROMANS.

B. C.	
753-366	The Ancient Roman Constitution.
343-265	Conquest of Italy.
264-146	The Punic Wars.
229-129	Foreign Conquests of Rome.
133-79	First Civil Wars. The Gracchi. Marius. Sulla.
79-60	From Sulla to Cæsar, Pompey and Cicero.
60-44	Cæsar.
44-30	The Second Triumvirate.
31 B. C. to 68 A. D.	Augustus and the Julian Emperors.
A. D.	
69-96	The Flavians.
96-192	The Antonines.
192-285	Military Anarchy.
285-337	Diocletian and Constantine.
337-476	Constantius. Julian. Theodosius.

MIDDLE AGES.

A. D.	
481-752	Clovis and the Merovingians.
570-1031	Mohammed and the Arab Invasion.
715-800	The Empire of the Franks. Charlemagne.
812-987	The Last Carlovingians and the Northmen.

800-850 The Third Invasion.
850-1100 Feudalism.
887-1250 German Empire. Struggle between Papacy and Empire.
1059-1492 Crusades in East and West.
987-1328 Formation of the Kingdom of France.
1066-1327 Formation of the English Constitution.
1328-1453 The Hundred Years' War.

MODERN TIMES.

A. D.
1450 The Renaissance.
1510-1560 The Reformation.
1522-1563 The Catholic Restoration.
1533-1603 Elizabethan Era.
1618-1648 The Thiry Years' War.
1649-1660 The Commonwealth (Cromwell).
1688-1714 Coalitions Against France.
1776 Declaration of Independence (U. S.).
1796-1815 Napoleonic Wars.
1837-1901 Victorian Era.

Chronological Index

OF SOME OF THE LEADING EVENTS IN THE HISTORY OF THE WORLD

B. C.

2240 Hammurabi unifies and liberates Babylonia from the Elamites and lays the foundation of Babylon's future greatness.

1850-1630 Era of the Hebrew patriarchs Abraham, Isaac and Jacob, etc., according to the Biblical tradition. (Abraham is also placed in connection with Hammurabi, 2240.)

1630-1200 Era according to Hebrew tradition of the sojourn of the Children of Israel in Egypt. (Another terminus about 1415.)

1503-1449 Thotmes III. reigns in Egypt, conquers Palestine and Syria at battles of Megiddo and Kadesh (overthrow of Hittites), conquers Nubia, erects a great temple at Karnak. Greatest extent of Egyptian power.

1500-1400 First nine books of the "Rig Veda" arranged (approx.).

1500 Assyria is independent of Babylonia.

1300 The kingdom of Mycenæ in Greece is at its height.

1200-800 "Atharva Veda" composed (approx.).

1200 Near this time, probably under Meneptah or his successors, the Children of Israel, led by Moses, leave Egypt. (Another date about 1420 B. C.)

1193 The Trojan war begins, led by Agamemnon of Mycenæ.

1160 Era of Israel's entrance into Canaan. (Another reckoning, two centuries earlier.)

1100 Tenth book of the "Riga Veda" composed (approx.).

1050 Smyrna and the other Æolian cities are founded in Asia Minor.

1000-800 Yajur and Sama Vedas composed (approx.).

973 The Temple at Jerusalem is founded.

900-700 Greek Epic Poetry is at its best.

776 First Olympic games are held in Elis and form the first Olympiad, from which the Greeks later reckoned dates.

753 Legend of Romulus and the founding of Rome, and also the temple of Jupiter on the Capitolium.

722-721 Fall of Samaria and the end of the kingdom of Israel.

700-460 Bloom of lyric poetry in Greece; Archilochus, followed by Tyrtæus, Terpander, Alcman, Sappho, Alcæus, Simonides, Bacchylides and, greatest of all, Pindar.

621 The Book of Law (Deuteronomy) is found in the Temple at Jerusalem and occasions the reform of Josiah.

586 Pythian games established at Delphi.

575 Nemean games established in Greece.

557 Gautama Buddha (Sakyi Muni) is born.

551-479 Confucius (King Kiu), foremost Chinese philosopher.

500-406 Tragedy at Athens is at its best.

500 Dramatic contest of Aeschylus, Cheorilus and Pratinas.

485 Darius dies and Xerxes I. succeeds him on the throne of Persia.

464-424 Artaxerxes I. (Longimanus) is sovereign of Persia.

351 First "Phillipic" oration of Demosthenes.

340-338 The great Latin war; the Latins receive Roman citizenship and Latium is Romanized.

285-247 Ptolemy II. (Philadelphus) reigns in Egypt; the Museum in Alexandria flourishes with distinguished men of science and literature; the Jewish Scrptures begin to be translated into Greek for the Jews at Alexandria (Septuagint version); bucolic poetry (Theocritus) is at its best.

280 The Achean and Æolian Leagues of the Greeks unite against Macedon. Pyrrhus wins the battle of Heraclea, but with heavy loss. First meeting of the Greek phalanx and the Roman legion.

264 The First Punic War.

218 The Second Punic War.

206-25 A. D. Han dynasty of China; recovery of the classics and revival of learning.

184 Death of Plautus, the best of the early Roman writers of comedy.

183 Philipoeman is captured and put to death by the Messenians; he is succeeded by Lycortas, father of Polybius, the historian.

169 Death of Ennius, the first great Roman epic poet.

149 Cato (the Censor), writer on history and agriculture, dies.

104 A change of calendar in accordance with the calculations of Sze-ma Tsien is adopted in China; from this epoch the modern period of Chinese chronology begins.

88 Sacred texts of Buddhism (Tripitaka) reduced to Pali writing in Ceylon.

54 Death of Catullus, the lyric poet.

27-14 A. D. The Augustan Age of Latin literature (Vergil, Horace, Ovid, Tibullus, Propertius, Livy, Mæcenas, the patron of literature).

CHRISTIAN ERA.

4 B. C. Jesus the Christ is born.

17 A. D. Ovid and Livy die.

54-68 Nero emperor.

64 Rome is burned, as alleged, by the secret orders of Nero. Nero begins a persecution of the Christians.

65 Buddhism introduced into China from India. Seneca, the philosopher, and Lucan, the poet, are put to death.

105 paper is invented by Tsai Lun in China.

115 Trajan annexes Parthia; the Roman Empire reaches its greatest extent; the Silver Age of Roman literature (Tacitus, Pliny, Quintilian, Juvenal) falls chiefly within Trajan's reign.

161-180 Marcus Aurelius emperor in Rome.

394 Olympian games abolished.

405 The art of writing is introduced into Japan from China, and taught at court by a Korean named Wangin.

442 Attila invades Thrace.

451 Attila invades Gaul and besieges Orleans; Battle of Chalons.

MEDIEVAL HISTORY.

525 Bœthius, the philosopher, author of the "Consolation of Philosophy," after filling the highest offices under Theodoric the Great, is falsely accused of treason by his enemies; he is imprisoned and executed by the order of Theodoric, who dies the following year.

529 Justinian publishes his Code and Pandects of the Roman law, which becomes the basis of the civil law in nearly all civilized nations.

570 or 571 Mohammed is born.

732 Charles Martel, at the head of the Franks, overthrows the Saracens in the great battle of Poitiers, and drives them back beyond the Pyrenees.

786 Harun-al-Rashid (the Just) becomes caliph of the Arabian empire, and introduces an era of remarkable enlightenment and prosperity.

871 Alfred the Great becomes king of England and begins the development of law and learning.

912 Abderrahman III. begins to reign in Cordova, introducing the Golden Age of Arabian power in Spain.

1096 The army of crusaders, the chivalry of medieval Europe, set out for the East under Godfrey of Bouillon, Hugh of Vermandois, Stephen of Blois, Robert of Flanders, Bohemond of Tarentum and Raymond of Toulouse.

1098 Antioch is stormed and yields to the crusaders, who, in their turn, are besieged, but rout their foes and open the way to Jerusalem.

1121 Abelard, notable among the founders of Scholastic Theology, is cited before the Synod of Soissons and his books are burned.

1146 A new crusade against the Infidels is preached by St. Bernard, the cause of the movement being the capture of Edessa by the Fatimites and the massacre of the Christians there.

1149 The Christians, after attempting to storm Damascus, are forced to retreat; they return to Europe, having lost thus far in the Holy Wars about two million men, with no substantial gains.

1187 The Christian kingdom, established in Jerusalem in 1099 by the crusaders under Godfrey of Bouillon, is overcome by Saladin, who dethrones King Guy of Lusignan; William, archbishop of Tyre, thereupon preaches the third crusade.

1261 The Latin Empire in the East is overthrown by Michael Palæologus, emperor of Nicæa, who founds a dynasty in Byzantium.

1272 Prince Edward of England, who has accompanied St. Louis, withdraws from the crusade and it is abandoned; the attempt to recover the Holy Land is not again renewed.

1274 St. Thomas Aquinas, the famous Italian scholastic theologian and philosopher, known by his sobriquets of "The Angelic Doctor," "Father of Moral Philosophy" and the "Dumb Ox," dies near Terracini, Italy, March 7th. His chief work, "Summa Theologiæ," greatly influences the opinions of succeeding philosophers.

1300 Beginning of the literary period called the Renaissance, or Revival of Learning, marked by the ascendency of Dante in Italy, and a century later by Chaucer in England. The age receives a great impetus from the spreading knowledge of Greek literature in the fifteenth century, extending to the middle of the sixteenth century.

1318 Dante completes the Divina Commedia after eighteen years of composition.

1438 Gutenberg first prints with movable types; the printing press is invented two years afterward.

1450 The Renaissance or Revival of Learning, at first mainly a literary movement, extends to the arts, and in particular to architecture, modifying first the public structures of Italy and afterwards those of all Central and Western Europe.

1452 Great exodus of Greek Scholars from Constantinople; they make their way to the more enlightened parts of Western Europe and greatly promote the oncoming revival of arts and learning.

1492 Christopher Columbus, leading an expedition under the auspices of Ferdinand and Isabella of Spain, reaches America.

1512 The Medici regain their authority in Florence.

1517 In October Martin Luther puts forth his theses at Wittenberg, and the Reformation begins in Germany.

1527 The Medici are driven from Florence.

1529 The Reformers in Germany present a protest (hence the name Protestant) to the diet of Spires, April 19. The Medici return.

1600 The philosopher, Giordano Bruno, after seven years' imprisonment in Rome by the Inquisition on a charge of heresy, is burned at the stake.

1610 By means of his newly invented telescope Galileo discovers the satellites of Jupiter.

1635 The French Academy of Arts and Sciences is founded.

1638 New Haven is colonized; Harvard College, the oldest institution of the higher learning in America, founded 1636, is named.

1641 Descartes publishes his philosophcal system, in which the superstructure of all positive knowledge is based on self-consciousness.

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NOTE.—There are 125 pages of bibliography in the ten volumes.

Pronouncing Vocabulary

PREPARED FOR THE LECTURES

International Congress of Arts and Sciences

Achæan (a-ke-an), of, or pertaining to, Achaia, a section of northern Peloponnesus, or Greece in general.

Æsculapius (es-ku-la-pe-us), the god of medicine.

Æschylus (es-ku-lus), the Father of Greek tragedy.

Æolian (a-o-le-an), of or pertaining to Æolia, or Æolis, in Asia Minor.

Ægean (a-ge-an), of or pertaining to the sea, or arm of the Mediterranean Sea, east of Greece.

Achilles (ac-kil-ez), the hero of Homer's Iliad.

Achaemenian (ak-e-men-i-an), of, pertaining to, or designating, the Achaemenidae.

Ahasuerus (a-haz-u-e-rus), the name of two kings of Persia and Media.

Alcaeus (al-ka-us), a lyric poet of Mitylene.

Anaxagoras (an-aks-ag-o-rus), philosopher.

Antigonus (an-tig-o-nus), general of Alexander the Great.

Antioch (an-te-ok), a city in Syria.

Aphrodite (af-ro-di-te), the goddess of love and beauty.

Apollo (a-pol-o), the god of manly youth and beauty.

Archimedes (ar-ki-me-dez), a celebrated Greek philosopher.

Aristophanes (ar-is-to-fanes), the Athenian poet.

Aristotle (ar-is-to-tle), the Greek philosopher.

Artaxerxes (ar-taks-urk-sez), a king of Persia.

Aurelius (o-re-li-us), Antoninus Marcus, Roman Emperor and philosopher.

Bacchylides (bac-kil-e-dez).

Belles-Lettres (bel-let'r), polite or elegant literature.

Boccaccio (boc-ka-ci-o), Italian author.

Boethius (bo-e-the-us), Roman philosopher and statesman.

Buddha (bood-a), Indian philosopher, founder of Buddhism.

Buddhism (bood-ism).

Cæsar (ce-zar).

Callimachus (cal-lim-a-kus), Greek poet and grammarian.

Cato (ka-to), Roman patriot.

Catullus (ka-tul-us), Roman poet.

Cervantes (cer-van-tas), Spanish novelist.

Chaldean (kal-de-an), of or pertaining to Chaldea.

Charlemagne (shar-la-man), Charles I, Emperor of the West.
Cicero (sis-er-o), Roman orator, statesman, man of letters.
Confucius (con-fu-shi-us), Chinese philosopher.
Copernicus (co-pur-ni-cus), astronomer.
Dante (dan-te), Italian poet.
Democritus (de-moc-ri-tus), the "laughing philosopher."
Demosthenes (de-mos-the-nez), Athenian orator.
Descartes (da-kart), French philosopher.
Diodorus (de-od-o-rus), Roman historian.
Dionysius (de-o-nish-us), the elder, tyrant of Syracuse.
Dionysius, of Halicarnassus, Greek historian.
Epictetus (ep-ik-te-tus), Roman stoic philosopher.
Euhemerism (u-he-mer-ism), the theory, held by Euhemerus, that the gods of mythology were but deified mortals, and their deeds only the amplification in imagination of human acts.
Euripedes (u-rip-i-dez), Athenian tragic poet.
Eusebius (u-se-be-us), bishop of Cæsarea.
Galileo (gal-e-le-o), Italian astronomer.
Goethe (gur-ta), German author.
Hegel (ha-gel), German philosopher.
Hellenic (hel-len-ic), of, or pertaining to, the Hellenes, or inhabitants of Greece.
Heraclitus (her-a-kli-tus), the "weeping philosopher" of Greece.
Herakles (her-a-klez), Hercules.
Hermes (hur-mez), an Olympian god.
Hipparchus (hip-par-kus), tyrant of Athens; Bythynian founder of scientific astronomy.
Hippocrates (hip-pok-ra-tez), father of medicine.
Huguenot (hu-ge-not), a French Protestant in the sixteenth and seventeenth centuries.
Iago (e-ah-go), the ancient, or ensign, of Othello.
Iran (e-ran), the native name of Persia, originally applied to the territory as far east as the Indus.
Islam (is-lam), the religion of the Mohammedans.
Isocrates (is-soc-ra-tez), Athenian orator and teacher of rhetoric.
Koran (ko-ran), the scriptures of the Mohammedans.
Livy (liv-i), Roman historian.
Lysippus (li-sip-us), Greek sculptor.
Machiavelli (ma-kya-vel-le), Florentine statesman and political writer.
Maecenas (ma-se-nas), Roman statesman and patron of letters.
Manichaeism (man-e-ka-ism), a doctrine derived from Zoroastrianism, viz.: that man's body is the product of the kingdom of Darkness (Evil), but that his soul springs from the kingdom of Light (Good). Evil is perpetually striving to drag man down, while Good (Christ) is continually trying to save him.
Medici (med-e-che), of, or pertaining to, a Florentine family, the Medici, of great power and wealth in the fourteenth, fifteenth, and sixteenth centuries.
Medieval (me-de-e-val), relating to the Middle Ages.
Moliere (mohlyare), French dramatist.
Monotheism (mon-o-the-ism), the doctrine or belief that there is but one God.
Montesquieu (mon-tes-ku), French jurist and philosopher.
Mycenæan (mi-se-ne-an), of, or pertaining to, the ancient city

of Mycenae, in Argolis, or designating, or pertaining to, the civilization of which that of its people was typical.

Nineveh (nin-e-va), ancient city of Assyria.

Odyssey (od-is-se), an epic poem attributed to Homer.

Omar Khayyam (o-mar-ki-yam), Persian poet.

Papyrus (pa-pi-rus), writing material, made from the pith of a plant (*cyperus papyrus*), used by the ancient Egyptians, Greeks and Romans.

Pericles (per-e-klez), Athenian statesman.

Persepolis (per-sep-o-lis), ancient city of Persia.

Phidias (fid-e-as), famous Greek sculptor.

Plato (pla-to), Greek philosopher.

Pleiades (pla-ah-dez), the seven daughters of Atlas and the nymph Pleione.

Pliny (plin-i), the elder, Roman naturalist and author. Pliny the younger, Roman author and orator.

Plutarch (ploo-tark), Greek biographer and moralist.

Polybius (po-lib-e-us), Greek historian.

Polytheism (pol-e-the-ism), the doctrine of, or belief in, a plurality of gods.

Pompeii (pom-pa), ancient city, Italy.

Praxiteles (prax-it-e-lez), Greek sculptor.

Ptolemy (tol-e-mi), king of Egypt.

Pythagoras (py-thag-o-ras), Greek philosopher.

Renaissance (ren-e-sance), a new birth or revival. Specif. The transitional movement in Europe between the medieval and the modern world, marked especially by the classical design in art and letters.

Sanskrit (san-skrit), the ancient Aryan language of India.

Scipio (sip-e-o), Roman general.

Seneca (sen-e-ka), Roman stoic philosopher.

Socrates (soc-ra-tez), Athenian philosopher.

Sophocles (sof-a-klez), Greek tragic poet.

Theocritus (the-ok-ri-tus), Greek pastoral poet.

Thucydides (thu-sid-e-dez), Athenian historian.

Tiryns (ti-rins), prehistoric citadel in Greece.

Torricelli (tor-re-chel-le), Italian physicist.

Tyrrhene (tir-en), Etruscan.

Upanishads (oo-pan-e-shad), speculative treatises, forming a part of the Vedic literature.

Vedas (va-da), the most ancient sacred literature of the Hindus.

Vico (ve-ko), Giovanni Battista, Italian philosopher.

Vinci, da (da ven-che), Leonardo, Italian painter, sculptor, architect and engineer.

Virgil (vur-jil), Roman poet.

Xenocrates (ze-nok-ra-tez), Greek philosopher.

Xenophon (zen-o-fon), Athenian historian and general.

Xerxes (zurk-zez), the Great, king of Persia.

Zoroaster (zo-ro-as-ter), founder of the ancient Persian religion.

Biographical Dictionary

Giving Particulars of the Lives and Leading Achievements of the Most Distinguished Men and Women of All Ages and Countries

A

Acton, Sir John Francis Edward, born in France 1736; died 1811, a naval officer of the revolutionary epoch. He was responsible for a reign of terror at Naples. Recalled by France, 1804.

Aeschylus, the father of the Greek tragic dramas (456-525 B. C.). Composed seventy plays and gained the prize for dramatic excellence thirteen times.

Agassiz, Alexander, born 1835, son of the celebrated Jean Louis Rodolphe Agassiz; has followed in the footsteps of his father in zoological and geological labor. Both father and son have rendered valuable services to this branch of learning in America.

Anselm, St. (1033-1109), born in Italy, died at Canterbury; founder of scholastic theology. The Roman Church celebrates him on April 21, the date of his death.

Aristophanes (448-380 B. C.) was one of the foremost Athenian playwriters, and the greatest of the Greek comic poets. He is said to have composed fifty-four plays in all. Eleven of these only have survived. They are full of satire, and deal unsparingly with the people and institutions of his time.

Aristotle (384-322 B. C.). This, the most famous of all the Greek philosophers, was a disciple of Plato, after whose death he retired from Athens, and later on undertook the education of Alexander, afterwards known as Alexander the Great. Subsequently at Athens he established the Lyceum and founded the Peripatetic school of philosophy, which has had great influence upon the expansion of thought.

Arrhenius, Svante August, a noted Swedish chemist, born 1850; has propounded unique theories relating to Light, and they have a numerous following among progressive scientists. According to Arrhenius the first infinitesimal forms of life were carried to the planet on rays of light.

Augustine (354-430) was Bishop of Hippo for over thirty years. He was born in Africa, but went to Rome, and under the influence of St. Augustine became deeply imbued with religious thoughts, writing much upon doctrinal subjects, and his works are held in great esteem.

Aurelius, Marcus Antoninus (121-180), a Roman emperor celebrated for his devotion to philosophy. His reign was wise and temperate. He was a disciple of the stoics.

B

Bach, Johann Sebastian (1685-1750), one of Germany's greatest musical composers, his "Passion Music," "Preludes and Fugues," and other compositions being unrivalled in their class.

Bacon, Francis, Lord Verulam and Viscount St. Albans (1561-1626), was one of the greatest of English philosophers and statesmen, who was Attorney-General to Elizabeth, and under James I. became Lord Chancellor. His writings were marked by keen insight, brilliancy of language and a depth of thought which place them in the first rank of philosophical literature. His "Newton Organum" and his "Essays" are splendid monuments of learning and wisdom.

Baer, Karl Ernst von (1792-1876), naturalist, celebrated for researches in embryology. Professor in several universities of Europe.

Balzac, Honore de (1799-1850), one of the greatest of French novelists, and the author of over eighty novels, to which he gave the covering title of "La Comedie Humaine." His stories are faithful depictions of almost every phase of French life, and in character delineation he has never been excelled.

Bancroft, George (1800-1891), American historian and statesman. Was Secretary of the Navy in 1845, and in 1846 was Minister to London. His "History of the United States" is a monumental work, conceived in a philosophic spirit, and highly valued.

Bastien-Lepage, Jules (1848-1884), French painter of note. His greatest work, "Joan of Arc," is in the Metropolitan Museum of Art, N. Y.

Becquerel, Antoine Cesar (1788-1878), French physicist, who made many discoveries in electricity and electro-chemistry.

Beethoven, Ludwig van (1770-1827), born at Bonn, died in Vienna. One of the kings of musical composition, whose symphonies, sonatas, overtures and operas all reach the highest standard of musical imagination. He received lessons from Mozart, and was also under Haydn for a time. His works were performed during his lifetime in all parts of Europe, and everywhere with success. Although deaf in his later years he continued to compose, and in all left behind him 128 important compositions.

Bentham, Jeremy (1748-1832), the founder of the school of political philosophy the tenets of which were extended by John Stuart Mill. His works on "Government," "Usury" and "The Principles of Morals and Politics," expounded the Utilitarian system with great lucidity.

Beowulf, hero of an Anglo-Saxon epic poem in alliterative verse of unknown authorship. It is the oldest epic in the Germanic group of languages.

Blackstone, Sir William (1723-1780), was a Justice of the Court of Common Pleas. His great work "Commentaries on the Laws of England" became one of the British classics, and has been edited and annotated by Coleridge, Chitty and other legal luminaries for authoritative reference to the present date.

Boccaccio, Giovanni (1313-1375), Italian novelist, friend of Petrarch. He wrote the "Decameron," a book of 100 stories, much drawn upon by later writers. It is an undis-

puted classic, highly valued by all students of literature.

Boethius (475-524), Roman philosopher known to fame for his translation of Aristotle and the book written during imprisonment "De Consolatione Philosophiæ," parts of which were done in English by King Alfred and Chaucer, who testify to his influence upon Anglo-Saxon scholarship.

Boileau-Despreaux, Nicolas (1636-1711), a French poet who was contemporary with Moliere, and wrote many classical imitations which were highly thought of in his own time and later, and are still frequently referred to.

Bossuet, Jacques Benigne (1627-1704), French prelate, pulpit orator, writer and theologian. Bishop of Meaux 1681.

Botticelli, Sandro (1446-1510), Italian painter and disciple of Savonarola, the democrat. Produced many notable pictures, and was invited by Pope Sixtus IV. to asist in decoration of the Sistine Chapel. His series of illustrations to Dante's "Divine Comedy" are world-famous.

Bourget, Paul born at Amiens 1852, French novelist and critic of much influence upon contemporary literary thought. His works include many novels and essays of notable literary quality.

Brahms, Johannes, born at Hamburg 1833, pianist, concert director and composer of choral and chamber music. He is admired chiefly for his symphonies.

Brandes, Georg Morris Cohen, born at Copenhagen 1842, a Danish writer on æsthetics and the history of literature. He left his native Denmark and settled in Berlin (1877), being charged with radicalism and free-thinking. He is prominent among contemporary scholars.

Bright, John, born in England 1811, died 1889; distinguished orator and statesman. He agitated the doctrines of the Anti-Corn-Law-League 1838-40, subsequently delivering many important speeches on great political topics of his day.

Brinton, Daniel Garrison (1837-1899), American surgeon and ethnologist. He was a professor in the Philadelphia Institute of Natural Sciences and in the University of Pennsylvania.

Buckle, Henry Thomas (1821-1862), author of "History of Civilization in England" (1st volume 1857), a work which created a sensation by its novel central argument, which is now accepted without dispute. It sets forth the special doctrine of climate, soil, food, as the factors of English intellectual progress.

Burne-Jones, Sir Edward (1833-1898), English painter who studied under Dante Gabrielle Rosetti, whom he imitated, later forming a romantic style of his own. He aims to express ideals rather than realities. He has introduced many unique designs for stained glass and other decorative work.

C

Cadmus, reputed founder of Thebes, 1550 B. C., and introducer of Greek alphabet. He is held to be a legendary creation of ancient Greece.

Calderon de la Barca (1600-1681), classic Spanish dramatist and poet; gained the praise of Lope de Vega. He served in the army, afterwards in the church. In the latter capacity he wrote Corpus Christi plays performed each year in Toledo, Seville and

Granada Cathedrals. His secular work as a playwright was never discontinued, and he made a list of 111 plays he had written, exclusive of 73 sacramental pieces.

Cato, Marcus Porcius, born at Rome 95 B. C., committed suicide 46 B. C. Grandson of Cato the Censor who bore the same name. The Censor was born 234 B. C., died 149 B. C. He labored to restore simple virtue to Roman life and manners. He succeeded in causing the third Punic War by closing every speech with a thrilling attack upon Carthage. Fragments are extant of his works, "De re rustica" and "Origines."

Cellini, Benvenuto, born at Florence 1500, died 1571; sculptor and worker in gold and silver. His name is illustrious in art. He was patronized by the Medici family. His autobiography is a work of great interest, and describes a marvellous career.

Cervantes Saavedra, de (1547-1616), Spanish poet and novelist, author of the celebrated novel "Don Quixote" (1605-1615), which he is said to have written during imprisonment for debt. His other works are insignificant by comparison with this, and it has surrounded his name with enduring renown, second to few among classics.

Chateaubriand, de, Francois Rene, born in France 1768, died 1848; author and statesman, created a peer of France in 1815, ambassador to London 1822, minister of foreign affairs 1823-24. Converted to Christianity in 1800. His published works are an important part of standard literature in France.

Chaucer, Geoffrey (1340-1400), celebrated English poet, served in the British army with distinction and afterwards in political offices; enjoyed the patronage of Henry IV., also that of Henry's father, "John the Gaunt." His numerous political works occupy a brilliant place of honor in English letters.

Chenier, de, Andre Marie, born Constantinople 1762, guillotined at Paris 1794. Only two of his poems were published during his lifetime. Many editions of his works have appeared under the auspices of celebrated editors. Beuve pronounced Chenier the greatest writer of French classic verse since the days of Boileau and Racine. His frankness of political expression led to his untimely end.

Cicero, Marcus Tullius (106-43 B. C.), a great Roman Republican orator and philosopher, whose works won him great fame and are assured of immortality. His younger brother, Quintus Tullius Cicero (102-43 B. C.), was a Roman soldier of some note. Both were slain.

Cimabue, Giovanni (1240-1302), a celebrated Florentine painter, master of Giotto, and leader of the movement which led to the formation of what is called the Florentine school. His frescoes are of great beauty.

Coke, Sir Edward (1552-1634), an eminent English judge, and author of the legal classic, "Coke upon Littleton." He served as Speaker of the House of Commons and as Attorney-General before he became Chief Justice, and was the merciless prosecutor of Sir Walter Raleigh and of the Gunpowder plotters; but made a fine fight for English freedom in Parliament against Buckingham, towards the close of that ill-fated Royal favorite's career.

Cominius, Johann Amos, born in Moravia 1592, died 1670; Czechic theologian and educator, expelled by imperial mandate 1621, settled in England, where he supported himself by teaching. Was later invited to improve the educational system of his country.

Comte, Auguste (1798-1857), a French philosopher and founder of the "Positive" school of philosophy. He has exercised great influence upon modern political economy, and his system of philosophy was warmly taken up in England.

Constantine the Great (272-337), Emperor of Rome from 306 to the time of his death. He espoused Christianity with much fervor, and showed great daring as a commander, extending the Roman Empire eastward to Byzantium, which was afterwards called Constantinople in his memory.

Cope, Edward Drinker (1840-1897), American biologist and palæontologist of wide authority, discoverer of many species of extinct and recent vertebræ, professor at Haverford College 1864-67, palæntologist to the United States Geological Survey.

Corliss, George Henry, born in America 1817, died 1888; was a powerful factor in developing the modern steam engine. His first patents were obtained in 1849.

Corneille, Pierre (1606-1684), the French tragic dramatist, whose "Cid," "Polyeucte," "Le Menteur," and other plays were eminently successful, and marked a new era in French dramatic production.

D

Darwin, Charles Robert, born in England 1809, died 1882; celebrated naturalist. He published in 1859 his chief work "On the Origin of Species." In this he propounded the theory of biological evolution, called the "Darwinian Theory."

Daudet, Alphonse (1840-1897), a humorist distinguished in modern French letters. His novels have been translated throughout the civilized world. Many have been dramatized and performed under original names.

Delacroix (1799-1863), a leading painter of the French romantic school.

Democritus (460-357 B. C.), the Greek philosopher to whom the conception of the Atomic theory is attributed. His cheerful disposition led to his being styled "the laughing philosopher," and the tradition tells that he put out his eyes in order to prevent being distracted in his speculations.

Demosthenes (385-322 B. C.), the greatest orator of ancient Greece. His splendid orations had a marked influence in shaping the history of his day.

Descartes, Rene (1596-1650), the famous French philosopher, mathematician and author, whose Cartesian philosophy, the basis of which is summed up in the words "Cogito, ergo sum" ("I think, therefore I exist"), is well known.

Diaz, Bernal, born about 1498, died about 1593; author and soldier of Spain. His "Histria de la Conquista de Nueva Espana" is the standard authority. It deals with the conquest of Mexico, and is written in rough literary style.

Diodorus lived second half of first century. Greek historian who wrote a "Historical Library" in forty books.

Diogenes (412-322 B. C.), an eccentric philosopher of ancient

Greece, who belonged to the school of Cynics. He was freed from slavery in his old age by Xeniades, a wealthy man of Corinth.

Dionysius, surnamed "The Elder," born about 430 B. C., died 367 B. C.; Tyrant of Syracuse. He encouraged letters, was a patron of Plato and himself won prizes in the celebrated literary contests of that time.

Donatello, (1386-1466), Florentine sculptor, called the precursor of Michael Angelo.

Donizetti (1797-1848), Italian composer who wrote about 65 operas, some of great fame, among them "Anna Bolena" (1830), "Lucia" (1835), "Don Pasquale" (1843), etc.

E

Edison, Thomas Alva (born at Milan, Ohio, 1847), invented the duplex telepraph which he developed subsequently into quadruplex and sextuplex transmission. The carbon telephone transmitter, the microtasimeter, the aerophone, the megaphone, the phonograph and the incandescent electric light are also Edison's inventions.

Empedocles, born 490 B. C., died 430 B. C. Greek philosopher who followed Pythagoras and Parmenides in his teachings. He encouraged the masses to ascribe a superhuman character to his powers, and is said to have thrown himself into the crater of Aetna in order to stimulate faith in him.

Epictetus of Hierapolis, the Stoic philosopher, who lived in the 1st century and was a moral teacher of great repute and influence.

Epicurus (342-270 B. C.), the founder of Epicurean philosophy, which taught that Virtue should be followed, because it leads to happiness which is the highest good.

Euclid (about 300 B. C.), wrote "The Elements" in 13 books, still in general use as a text book of elementary geometry.

Euripides (480-406 B. C.), celebrated Athenian tragic poet. He wrote about 75 plays, 18 of which are extant. He was much ridiculed by Aristophanes and Sophocles. Is said to have taken the principal prize in five of the famous dramatic contests. Plays: "Alcestis," "Medea," "Hippolytus," "Electra," "Andromache," "Iphigenia," etc.

Eusebius (264-340), an ecclesiastical historian of rare industry, whose works are still held in great esteem. His "Chronicon" is a history of the world down to his own time, while his "Ecclesiastical History" traces the chief events of the Christian Church over the same period. He was a native of Caesarea.

Eyck, Jan Van (1389-1440), a famous Flemish painter whose works are distinguished for their brilliance of color and finish. He is credited with the invention of painting in oils.

F

Fichte, Johann G. (1762-1814), was Professor of Philosophy, first at Jena and then at Erlangen and later Rector of the University of Berlin. His works had great influence upon the thought of his time, the idealist philosophy he taught being marked by much purity of conception. His chief works are "The Destination of Man" and "The Way to the Blessed Life."

Field, Cyrus West (born in Mass. 1819, died 1892), successfully laid the first sub-

marine cable connecting Europe with America. The first public cable message was sent over Field's cable to the President by Queen Victoria in 1858.

Fulton, Robert (born in Pennsylvania 1765, died 1815). Conspicuous in the history of engineering. He built the first steamboat in 1807.

G

Galen, Claudius, a Greek, born about 130 A. D.; was long a supreme authority in medical science. He composed some 500 treatises, of which 83 have been preserved.

Galilei, Galileo, born at Pisa 1564, died 1642; famed astronomer and physicist. His doctrines were papally condemned in Rome 1616, and he was forced by the Inquisition to abjure the Copernican theory in 1633. His labors in astronomy have been invaluable to science.

Gallatin, Herbert, born in Switzerland 1761, died in New York 1849. American statesman and financier. As a Congressman he established the Ways and Means Committee. Secretary of the Treasury 1801-14; a negotiator at Ghent for the United States 1814; Minister to France 1816-23; Minister to England 1826-27.

Gautier, Theophile (1811-1872), was an eminent French critic and novelist who at one time filled the position of secretary to Balzac. His romance "Mademoiselle de Maupin," caused a great sensation at the time of its publication, and though of an extremely erotic tendency, possesses brilliant literary merits. He was a poet of considerable power and his writings were very numerous and varied.

Geikie, Sir Archibald, born in Scotland 1835, geologist, knighted in 1891, Director General Geological Survey of United Kingdom, Professor in Edinburgh University, Director of Geological Survey of Scotland.

Ghiberti, Lorenzo, born at Florence 1378, died 1455; Italian sculptor, goldsmith and painter. He was awarded the commission to carve the chapel doors at Florence in competition 1403. He completed them at the age of 70. The doors are his great work. He executed minor works in his spare hours, notably the mitres of Popes Martin V (1419) and Eugenius IV (1434).

Gibbon, Edward (1737-1794), the celebrated historian of the "Decline and Fall of the Roman Empire." His great work is an enduring classic.

Grimm, Jacob (1785-1863), German philologist. Has been called the founder of comparative Germanic philology. "Grimm's Law" is so called from his analysis of the relative correspondence of Consonants which was first formulated by him. With his brother he filled important posts in the celebrated colleges and with him worked on the "German Dictionary" (1852), a great standard work of Germany.

Grotius, Hugo, born in Netherlands 1583, died in Germany 1645, poet, jurist, statesman and theologian. He is held to be the founder of scientific international law. Chief work, "De Jure belli et pacis," 1625.

H

Hamilton, Sir William (1788-1856), Scottish philosopher. Professor civil history, logic and metaphysics at Edinburgh 1836-56.

Handel, George Frederick (1675-1759), a German musical composer of great eminence, who passed most of his life in England composing operas and musical compositions of many kinds, and ultimately achieving world-wide fame by his great series of oratorios, including "Esther," "Deborah," "Saul," "Israel in Egypt," "The Messiah," "Samson" and "Judas Maccabaeus." Undoubtedly the greatest oratorio writer the world has produced.

Harvey, William (born 1578 in England, died 1657), physician, physiologist and anatomist, discoverer of the circulation of the blood. Modern medicine in every branch is indebted to Harvey, and all medical treatises reflect the importance of his life work.

Hegel, Georg Wilhelm Frederich (born 1770 in Germany, died 1831), contended that thought and being are identical. Hegalianism is radically opposite to Natural Science and to all results springing from Newtonian doctrine.

Helmholtz, von, Hermann Ludwig Ferdinand (1821-1894), physiologist and physicist, famous for discoveries in optics and acoustics. He invented the opthalmoscope in 1851, by means of which an epidemic of blindness is said to have been checked.

Herbart, Johann Frederick, born in Germany 1776, died 1841. Philosopher, Professor at Konigsberg 1809; at Gottingen 1833. The school he founded is specially noted for its significance in the study of psychology.

Herodotus (484-424 B. C.), the great Greek historian whose monumental work earned for him the title of the "Father of History."

Hippocrates (460-357 B. C.), the Father of Medicine. Was a native of Thessaly and practiced and taught in Athens.

Hobbes, Thomas (1588-1679), was a famous philosophical writer, whose "Leviathan, or the Matter, Form and Power of a Commonwealth," appeared in 1651, and aroused considerable sensation.

Homer, the most famous of all epic poets. Is supposed to have been a Greek who lived about 850 B. C., probably at Chios or Smyrna, and has generally been regarded as the author of the "Iliad" and the "Odyssey," though tradition rather than ascertained fact connects his name with those great poems.

Horace ("Flaccus Quintus Horatius"), born in Apulia 65 B. C., died 8 B. C. Lyric and satirical poet of Rome, son of a freedman and protege of Mæcenas, who gave him a Sabine farm 34 B. C. His well-known books exist in many careful translations and are greatly prized by scholars.

Hugo, Victor (1802-1885), poet of romantic school, novelist and playwright. French Academy 1841. He was exiled from France 1851, returning with the fall of the Empire (1870). Is best known by his novels, of which "Les Miserables" (1862) is perhaps the most celebrated.

Humboldt, von, Baron Friederich. Heinrich Alexander, born in Germany 1769, died 1859; celebrated author, traveler and scientist. "Kosmos" (1845-58) is considered the greatest of his many books.

Hume, David (1711-1776), the celebrated historian and philosopher, whose "History of England" is a fascinating and comprehensive study, and long held the chief place in English historical literature.

Hume's philosophical writings were no less famous, and widened the sphere of philosophical thought.

Huxley, Thomas Henry (1825-1895), an eminent scientist and author of numerous works covering a great range of research. After the publication of Darwin's "Origin of Species," Huxley became an ardent evolutionist. His biological work, "Man's Place in Nature," and his numerous essays were marked by great vigor and clearness of thought, and gave him a leading position.

Hypatia, Neo-Platonic philosopher of 4th and 5th centuries B. C., a woman of splendid beauty and unhappy fate. K. O. Muller's "History of the Literature of Ancient Greece" contains a stirring sketch of her life, character and philosophical creed.

I

Ibsen, Henrik (1828-1906), noted Norwegian dramatist. One of the greatest of his works, "Brand" (1866), was written in Italy during a voluntary exile; also "Peer Gynt." Ibsen is extolled by critics almost without dissent, and his plays are esteemed wonderful for stage technique. Some credit Ibsen with a deep philosophy which is to be read between his lines. His play, "The Doll's House" (1879), is possibly his most popular work.

Isocrates (436-338 B. C.), orator and writer of renown in ancient Greece. Mahaffey's History of Classical Greek Literature contains a fascinating study of his mind and character. Isocrates was the acknowledged authority of his day on eloquence after 392 B. C. Twenty-one of his orations are preserved.

J

Josephus Flavius (37-95), a Jewish historian whose "History of the Jewish War" and "Antiquities of the Jews" contained much valuable historical evidence bearing upon Biblical history. He was commander of the Jewish army, but was captured by Vespasian, who afterwards befriended him on the intercession of Titus.

Joule, James Prescott, born in England 1818, died 1899; physicist, first announced the law which led to a long series of experiments on the equivalence of heat and energy.

K

Kant, Immanuel (1724-1804). German scientist and philosopher whose "Critique of Pure Reason," published in 1781, was the subject of fierce discussion, and involved him in trouble with the Prussian government as to his religious belief. His speculations and the transcendental theories he worked out revealed a marvellous capacity of mind, and his works were of immense influence in shaping the philosophical thought of the 18th and 19th centuries.

Koch, Robert (born in Germany 1843), who announced a discovery of a cure for tuberculosis in 1890, is the discoverer of tuberculosis, cholera and other bacilli.

L

La Fontaine, Jean de (1621-1695), the celebrated French poet and fabulist. His fables have been translated into all languages, and are unique.

Lamarck, Chevalier de (1744-1829), a French naturalist who devoted himself with much

success to the study of zoological and botanical science. His chief work was the "Histoire Naturelle des Animaux sans Vertebres."

Lamartine, Alphonse (1790-1869), a French writer and statesman who was prominent in the Revolution of 1848, and was a member of the provisional government. He was an unsuccessful candidate for the Presidency in 1851, and after that took little part in political affairs. He was a prolific writer, his best known works being "History of the Revolution of 1848" and a "History of the Girondins."

Lavoisier, Antoine Laurent (1743-1794), often called the "father of modern chemistry," was born in Paris, and was the first to establish the fact that combustion is a form of chemical action. He fell under suspicion during the "Terror" and died by the guillotine.

Lawrence, William Beach (1800-1881), American jurist and student of international law.

Leonardi da Vinci (1452-1519), one of the greatest all-around geniuses the world has known. Famed as the painter of "The Last Supper," "The Head of Medusa," and other great works. He constructed aqueducts, and designed and superintended the erection of many notable buildings, and was one of the first to make a successful study of anatomy.

Liebig, von, Justus, born at Darmstadt 1803, died 1873; celebrated chemist, professor at Gressen in 1824, where he founded a laboratory for researches in organic chemistry and the application of chemistry to agriculture, food, etc.

Locke, John (born in England in 1632, died 1704), was perhaps the most influential thinker of modern times in the field of logic. His principal work is the "Essay on the Human Understanding." Locke was founder of the system which led Kant to the development of the critical philosophy.

Ludwig, Karl Friederich Wilhelm, born at Prussia 1816, physiologist, professor of note in famous German colleges.

Luther, Martin (1483-1546), the great German Reformer. Was ordained a priest in 1507. Became Professor of Theology at the University of Wittenberg and until 1517 was an orthodox Roman Catholic. His first idea of revolt occurred when he saw indulgences being sold, a practice which he openly condemned. For this he was excommunicated and summoned before the Diet of Worms, where he made a memorable defense. He then separated himself from the Roman Catholics and began to preach the Reformed Religion, his doctrine being formulated in the confession of Augsburg. He lived to see the principles of the Reformation widely established.

Lysippus, about 372-316 B. C., a Greek sculptor who fixed the type and proportions of the Greek hero "Hercules." He was a favorite of Alexander the Great. His sculptural canons called for a greater elongation of the figure and head, thereby changing the law of Polyclitus.

M

Macchiavelli, Nicolo (1469-1527), a Florentine diplomatist and historian, whose book, "Il Principe," has maintained its celebrity through the centuries as a masterly

exposition of the method of governing by artifice. He also wrote a history of Florence.

Magendie, Francois, born 1783, died 1855; a French physiologist whose experiments on the physiology of the nerves are of inestimable value to science. He was professor of anatomy in the College de France.

Maine, Sir Henry (1822-1888), the distinguished jurist. Was appointed Regius Professor of Civil Law at Cambridge University in 1847, and from 1862 to 1869 was Law Member of the Supreme Council of India. His works, "Early History of Institutions," "Ancient Law," "Popular Government" and "International Law," are of the highest importance.

Malherbe, de, Francois (1555-1628), celebrated French poet. Nicety of vocabulary, purity of expression and perfect verse are Malherbe's claims to classic honors. Boileau acknowledged him a master. He was called "the tyrant of words and syllables."

Mann, Horace (1796-1859), noted educator who reformed Massachusetts school system. Secretary Massachusetts Board of Education 1837-1848; Whig member of Congress 1843-53; president Antioch College 1852-59; defeated on Free Soil platform for Governor of Massachusetts 1852.

Marshall, John, foremost American jurist. Born in Virginia 1755, died 1835. Chief Justice United States Supreme Court 1801-35. He served in the Revolutionary War with distinction and was a delegate to the Virginia convention which ratified the Constitution in 1788.

Marx, Karl (1818-1883), an active Socialist, who was expelled from France and from 1845 lived mainly in England, where he identified himself with the cause of the laboring classes and was a most earnest worker. His work "Das Kapital," is a powerful fragment, only one volume being published.

Maupassant, de, Henri R. A. G. (1850-1893), French short story writer novelist and playwright. De Maupassant's many short stories have earned him a fame in France similar to that of Poe and Hawthorne in America.

Mayer, von, Julius Robert, born in Wurtemberg 1814, died 1878; surgeon and physician; reputed originator of the mechanical theory of heat.

McCormick, Cyrus Hall (born in West Virginia 1809, died 1884), invented the reaping machine which brought about enormous saving of labor in harvesting the world's wheat.

Mendelssohn, Moses, born at Dessau 1729, died 1786; philosopher, sometimes called the "German Socrates," grandfather of Mendelssohn Bartholdy, the composer.

Metternich, Prince von (1773-1859), a celebrated Austrian statesman and diplomatist, who for many years may be said to have guided the policy of his country. He was a powerful factor in the later career of Napoleon, at one time forwarding the arrangement for his marriage with Maria Louise; at another bringing all his influence to bear upon the combination which finally crushed the Emperor. During the commotion of 1848 he resided in England.

Michael Angelo Buonarroti (1474-1563), the renowned Italian painter, sculptor and

architect, whose genius was such a power in beautifying the churches of Rome and Florence. Was the last, and in some respects the greatest, of the Italian sculptors, while his large paintings, particularly "The Last Judgment," executed for the Sistine Chapel, are no less famous.

Mill, John Stuart (1806-1873), achieved high reputation by his numerous works on philosophical questions, and wrote, amongst other books, "Principles of Political Economy," "Essay on Liberty," "Utilitarianism," and "England and Ireland."

Milton, John (1608-1874), English poet of the higher rank. His "Paradise Lost" is his best known work. He wrote a popular plea for a free press. He was totally blind after 1652 and dictated his poetry to his daughters. The condition of a literary worker in his time may be inferred by his contract with a publisher, who agreed to pay him $75 in three instalments for "Paradise Lost."

Moliere, Jean B. (1622-1673), the greatest of French comic dramatists, who from being a poor, strolling player became the leading dramatist of his time, and the favorite of Court and Society. His greatest comedies are "Le Tartuffe," "Le Misanthrope," "Le Malade Imaginaire" and "Le Medecin malgre lui."

Mommsen, Theodor (1817-1903), celebrated German historian, who took an active part in the politics of his country. His writings are a marvel of profound learning. Was professor of law and history in the famous colleges of Germany.

Montaigne, de, Michel Eyquem (1533-1592), essayist diligently studied by Bacon and Shakespeare. His "Essais" were written in a skeptical spirit with peculiar literary charm. He wrote many studies of important men of his time.

Montesquieu, Baron de (1689-1775), a famous French philosopher and author, whose book on the "Spirit of Laws" made a great impression, and whose "Persian Letters," written in his younger days, was a brilliant if somewhat indelicate satire on the customs of the people of his day.

Morley, John Viscount, born 1838, English statesman and author, supporter of Gladstone's Home Rule policy. Chief Secretary for Ireland 1836. Works: "Edmund Burke," 1867; "Voltaire," 1872; "Richard Cobden," 1881; "Ralph Waldo Emerson," 1864, etc.

Morse, Samuel Finley Bollse (born in Mass. 1791, died 1872), designed and perfected the telegraph, exhibiting a working model as early as 1835. Congress, in 1843, granted Morse permission to construct the first telegraph line between Washington and Baltimore. He completed it in 1844, the first practicable telegraph line in history.

Mozart, Wolfgang Amadeus (1756-1791), the celebrated Austrian composer. Showed musical talent while very young, and performed in various capitals of Europe when only eight years of age. At twenty-five he accepted the position of musical composer to the Imperial Court of Vienna, and then began to write operas, producing in succession the "Nozze di Figaro," "Don Giovanni" and "Die Zauberflote." He also wrote some beautiful Masses and a Requiem of unsurpassed beauty.

Muller, Johannes (1807-1858),

one of the founders of modern physiology, professor at Bonn 1826-33; Berlin 1833.

N

Nageli, von, Karl Wilhelm, born at Kilchberg, 1817, died 1891; a scientist of great reputation for studies in the physiology and development of plants.

Newton, Sir Isaac (1642-1727), the great mathematician and phllosopher. His scientific discoveries were of the utmost importance, including the law of gravitation and the method of fluxions, while he also effected considerable improvements in the telescope. His numerous philosophical works are wonderfully lucid expositions of his theories and discoveries.

Niebuhr, B. G. (1776-1831), Professor of Roman history in the University of Berlin, and afterwards at Bonn. He obtained a world-wide reputation for his "History of Rome."

Nietzsche, Friederich Wilhelm, born in Saxony 1844, died 1900; German philosopher of note, professor of philology, Basel 1869-80. His works are widely read and quoted, notably "Thus Spake Zarathustra." (1883-1885.)

P

Paracelsus (born in Switzerland 1493, died 1541) is still a great name in medicine, owing to the impetus which he gave to pharmaceutical chemistry. He was extremely visionary. Middle Age superstition is responsible for a legend that he carried a small demon in the hilt of his sword.

Pasteur, Louis (born in France 1822), famous for laboratory researches in bacteria, permentation and all cognate branches; is acknowledged an important name in Therapeutics. Pasteur began the practice of inoculation for hydrophobia in 1885, an innovation which brought him into international notice.

Pater, Walter (1839-1894), contemporary English writer of note. Works: "Renaissance," 1873; "Imaginary Portraits," 1887, etc. He was educated at Queen's College, Oxford.

Peary, Commander R. E. (born 1854). Peary's discovery of the North Pole, April 6th, 1909, has been officially recognized by scientific bodies throughout the world, and the discoverer has been honored with the title of Rear Admiral by Congress. Modern geographical science in the near future will produce a fund of material out of the new domain of the Polar regions and contiguous Artic territory, while there is a probability of added geographical research in the Antartic.

Perugino, Pietro (1446-1524), a great Italian artist, excelling in religious subjects, and the painter of numerous fine frescoes, including some in the Sistine Chapel at Rome. Raphael was his pupil.

Pestalozzi, Johann H. (1746-1827), was a rich Swiss reformer and writer, who devoted his fortune to benevolent works, especially in connection with the education of poor children.

Petrarch, Francesco (1304-1374), the famous Italian poet, whose odes and sonnets "To Laura" are of marvellous beauty and fervor, and have been translated into all languages. He filled several important positions in the Church.

Petronius Arbiter, probably 66 A. D. Roman author whose surviving work consists chiefly of fragments from a novel in which he described a feast presided over by a rich, uneducated upstart. His writings are extremely vulgar, but valued for their pictures of Roman life and manners.

Phidias, the famous Greek sculptor, flourished from about 490 to 432 B. C. The productions of his chisel were pronounced to be the finest ever achieved, but nothing now remains to attest his genius except the sculptures in the British Museum that were obtained from the ruins of the Parthenon, widely known as the "Elgin Marbles."

Plato, originally Aristocles (429-347 B. C.), disciple of Socrates and teacher of Aristotle. He founded the Academic school of philosophy.

Pliny, the Elder, born 23 A. D.; perished in the erruption of Vesuvius 79 A. D., while trying to aid other victims. He wrote of tactics, history, grammar, rhetoric and natural science. Of his works only his "Natural History," in 37 books (presented to Titus 77 A. D.), is extant. It contains much information of great value to scholars.

Plutarch, born about 46 A. D., celebrated for his biographies treating of Greek and Roman celebrities. He was a Platonist.

Polybius (204-122 B. C.), the Greek historian who wrote a history in over forty books; but only the first five and certain fragments of the rest have come down to us.

Polycletus (452-412 B. C.), Greek sculptor and architect. Greek opinion adopted his "canon," which fixed the correct proportions of sculptured figures. He excelled in depicting the athletic ideal of ancient Greece.

Praxiteles, a Greek sculptor who lived in the 4th century B. C. His statues—especially his Aphrodite at Cnidus—were in some respects famed beyond all others, but few remain to testify to his genius.

Protagoras, was a celebrated Greek philosopher, who flourished at the beginning of the 4th century B. C. He incurred much enmity by his refusal to accept the story of the "Gods," and he was drowned while attempting to escape from his persecutors. He was a disciple of Democritus, and the first to take the designation of sophist.

Pythagoras (582-500 B. C.), philosopher and mathematician who founded a famous school at Crotona 529 B. C.

R

Racine, Jean (1639-1699), a distinguished French tragic dramatist, best known by his "Andromaque," "Phedre" and "Athalie."

Ranke, Leopold, von (1795-1886), celebrated historian, born at Leipsic. Extraordinary professor of history, Berlin 1825; ordinary professor, 1834; historiographer of Prussia, 1841, retired 1871.

Raphael, Sanzio (1483-1520), Italian painter of prodigious talent. Studied the great cartoons of Michael Angelo and Da Vinci; formed a style of his own from them. A great number of his paintings—largely of religious subjects—are extant.

Raynouard, Francois Juste Marie (1761-1836), French poet and scholar, noted for works on Provencal language.

Rembrandt (1606-1669), celebrated Dutch painter and etcher; leader of the school which bears his name. He painted between forty and fifty portraits of himself. His paintings are treasured in the public galleries of Europe and in many private collections.

Renan, Joseph Erneste (1823-1892), a philologist and historian, forced to resign the chair of Hebrew in the College de France for denying the Divinity of Christ. He wrote "La Vie de Jesus" 1863. He published many other histories and critiques on Christianity, including "The Index," 1889; also an introduction to the series "Historie du peuple d' Israel," 1887-94. French Academy 1878.

Ricardo, David (1772-1823), a celebrated English political economist of Hebrew descent, whose "Principles of Political Economy," published in 1817, gained him a high place among the exponents of the science. He was in Parliament for the last five years of his life.

Rontgen, Professor Konrad Wilhelm, born 1845, in Prussia, discoverer of Rontgen Rays, which won him the Nobel Prize of Physics in 1901. Has rendered vast service to the study of inorganic chemistry by exhaustive experimental labors.

Rousseau, Jean Jacques (1712-1778), was born at Geneva. In 1745 he proceeded to Paris, where, after a time, he made the acquaintance of Diderot, and wrote under his encouragement. Meanwhile Rousseau had been studying social questions with great ardor, and in 1750 published his romance, "Julie, ou la Nouvelle Heloise," which was followed in 1762 by "Emile." These two works contained so much that was at variance with convention, and so opposed to all ideas of moral restraint, that they called forth the condemnation of the orthodox, and Rousseau was obliged to leave France for a time. It was while in England that he wrote his remarkable "Confessions," and his celebrated "Le Contrat Social." The last years of his life were spent in Paris, in comparatively straitened circumstances. He had, however, given to France a new field of thought, and laid down principles of government and conduct which took deep root, and bore fruit a few years later in the French Revolution.

Rumford, Benjamin Thompson, Count, born in America 1753, participated in the Revolutionary War on the side of the British. He left to Harvard College the funds with which the Rumford Professorship of the physical and mathematical sciences has been maintained.

Ruskin, John (1819-1900), English art critic and writer. His writings are voluminous and authoritative in several fields, notably painting, architecture and political economy.

S

Sallust (86-34 B. C.), the Roman historian, was in turn quaestor and tribune. He stood high in favor with Julius Cæsar, accompanied him to Africa, and was made governor of Numidia. When he subsequently returned to Rome he built himself a palace and passed the remainder of his days in luxurious retirement. It was during

this period that his histories were written: "Catilina, Jugurtha" and "Historiarum Libri Quinque," only portions of which have come down to us.

Schelling, von, Friederich Wilhelm Joseph, born in Wurtemberg 1775; died in Switzerland 1854, philosopher of note, professor at Jena, Wurzburg, University of Berlin, various dates, and member of Berlin Academy.

Schlegel, August Wilhelm von (1767-1845), poet, critic and college professor. His work as a critic and translator is considered of great importance.

Schlegel, Karl Wilhelm von (1772-1829), poet, critic and author. Younger brother of above.

Schleicher, August (1821-1868), noted German philologist, professor at Jena, 1857. Author of valuable treatises on the languages of various countries.

Schopenhauer, Arthur, born at Dantzig 1783, died 1860; the chief modern exponent of pessimism in philosophy. His principal work is "The World as Will and Idea," 1819.

Schwann, Theodor, born in Prussia 1810, died 1882; founder of the cell theory, discoverer of pepsin and leading investigator of many epochal truths of modern microscopy.

Seneca, Lucius A. (4 B. C.-A. D. 65), the famous Roman philosopher who was tutor to Nero, and one of that emperor's most influential advisers. Disgusted at Nero's disgraceful acts, Seneca would have retired into private life, but Nero distrusted him and had him charged with conspiracy, and sentenced him to end his own life, a fiendish behest which the philosopher courageously carried out. Seneca's writings, or such as have come down to us, mainly consist of moral aphorisms.

Smith, Adam, born in Scotland 1723, died 1790. Chief works: "Wealth of Nations," 1787; "Theory of Moral Sentiments," 1759. He held important posts in various institutions of learning, but his celebrity rests upon "The Wealth of Nations," considered a vital work.

Socrates (born at Athens about 470 B. C., died there 399) devoted himself to philosophy early in his career and astounded his contemporaries by skill in reasoning with the sophists and others. His influence upon world ethics has been most profound. He made Virtue the equivalent of Knowledge. He was put to death in the presence of his disciples after being charged with impiety.

Solon (638-558 B. C.), surnamed "The Lawgiver." He reformed the laws of his time, improved the condition of debtors, and reformed the legislative bodies of Greece. In his later life he occupied his time composing elegies which became famous.

Sophocles (495-406 B. C.), the famous Athenian dramatist, who enjoyed the highest popularity at Athens, and in a contest with Aeschylus was crowned the victor. Of the 100 odd plays of Sophocles only seven have survived: "Antigone," "Electra," "Oedipus," "Ajax," "Trachiniae," "Philoctetes," and "Oedipus at Colonus."

Spencer, Herbert (1820-1903), was the son of a Derby schoolmaster. For some time followed the profession of civil engineer, but ultimately applied himself entirely to literary pursuits. His first

book was published in 1851 under the title of "Social Statics," when he was filling the position of sub-editor of the "Economist." In 1855 his "Principles of Psychology" appeared, in which he seems to have anticipated Darwin's theory of Evolution. The "System of Synthetic Philosophy" began to appear in 1860, and the last of its ten volumes was published in 1896.

Story, Joseph, born in Mass. 1779, died 1845; eminent American jurist. Democratic Member of Congress 1808-09; professor of law at Harvard 1829-45. His writings were edited by his son. They comprise many notable treatises on legal problems arising in American law and jurisprudence.

T

Tacitus, Cornelius, born 55 A. D., died after 117; Roman historian and orator, still consulted by careful scholars who have tested his authority by studious research.

Taine, Hyppolyte Adolphe (1824-1893), distinguished French historian, philosopher and critic. Honorary degree of LL. D. Oxford 1871, elected to French Academy 1878. He wrote many brilliant essays on historical, literary and esthetic subjects. His fame would be secure upon the following alone: "Classics of Nineteenth Century," 1856; "History of English Literature," 1864-65; "De l' intelligence," 1870; "Les originees de la France Contemporaine," 1875-1890.

Tertullian, Quintus (150-230), a Father and writer of the Latin Church, lived first in Carthage and then at Rome, and became a Montanist in 203, after conversion to Christianity some years previously. His chief work was his "Apologeticus," a defense of Christianity called forth by the persecutions under Septimus Severus.

Thucydides (471-401 B. C.) was a distinguished Greek historian, who was put in command of a force in the Peloponesian War, but not having acquitted himself to the satisfaction of his superiors, he was exiled, and lived for twenty years in obscurity, occupying himself with writing the history of the war in which he had himself taken part, producing one of the most graphic historical narratives known.

Titian (1477-1576), one of the greatest painters, was born at Cadore, and while a child was taken to Venice to live with an uncle. Revealing remarkable artistic talent, he was placed first under, and then with, the Bellinis, and made his first essays in painting for the public in conjunction with Giorgione, whom he soon surpassed. In 1511 he was at Padua, where he painted some notable frescoes; in 1512 he was back in Venice, with a studio on the Grand Canal, employed on important commissions. From this time forward he was in great demand, and exercised marvellous powers almost to the end of his life, dying at ninety-nine of the plague.

Tocqueville, Alexis de (1805-1859), a celebrated statesman and orator of France. His masterpiece, "Democracy in America" (1835-40), written from notes of a personal visit to the United States, secured his election to the Academy 1841.

Tolstoi, Count Leo (1828-1911), novelist, reformer and re-

ligious mystic. After the liberation of serfs in Russia he devoted himself to relief work among the peasants, and to study. He was considered a man of model sincerity. His works include "War and Peace," 1865-68; "Anna Karenina," 1875-78; "Sevastopol," 1853-55; "The Cossacks," 1886; "Two Pilgrims," "My Religion," 1885; "My Confession," "Commentary on the Gospel," "Life," "Kreutzer Sonata," 1890; "War," 1892.

Tredgold, Thomas (born in England 1738, died 1829), wrote important treatises upon the mechanical arts, notably "The Elementary Principles of Carpentry," 1820, and "The Steam Engine," 1827.

V

Voronese, Paul, born Verona 1528, died 1588; Italian painter of the Venetian school. He was befriended by Titian. His paintings include "Marriage at Cana" (Louvre), "Feast in the House of Simon" (Louvre), "Europa and the Bull" (London), "Leda and the Swan" (London), "Death of Adonis" (London), "Supper at Emmaus," "Venice Enthroned," etc.

Virchow, Rudolph (born 1821 in Prussia), anatomist, physiologist and anthropologist, is the founder of cellular pathology.

Voltaire, Francois Marie Aronet de (1694-1778), one of the greatest of French philosophers and writers, who was educated for the bar, but preferred literature. His first essays offended the authorities, and he lived in London for a couple of years (1726-1728), and there wrote some of his dramas. Returning to France, he published his "Philosophical Letters," which aroused the enmity of the priesthood to such an extent that the book was publicly burned. At this juncture the Marquise de Chatelet offered him the asylum of her castle of Cirey, and for the next fifteen years he made this his home, and there wrote some of his most famous works: "Discourses on Man," "Essays on the Morals and Spirit of Nations," "Age of Louis XIV.," among the rest. From 1750 to 1753 he lived in Berlin, on the invitation of Frederick the Great. Later he resided mostly at Ferney, and it was there that he composed his "Candide," and other novels. As a satirist he was unequalled in bitterness, and he was an unsparing enemy of religious convention.

W

Wagner, Richard (1813-1883), born at Leipsic, was the composer who exerted the greatest influence upon musical art during the 19th century. He revolutionized operatic methods, and doing away with set ballads and choruses, endeavored to give the same unity of action to an opera as would be realized in a play without music. This continuity of musical thought and action was a long time in forcing itself into acceptance, but today is acknowledged as the only adequate interpretation of dramatic musical expression. Wagner fought for his position with great pertinacity and courage, but it was not until the King of Bavaria enabled him to indulge his aims to their fuller development that he realized his ambition. At the famous opera house at Bayreuth were produced all the later Wag-

nerian operas of the "Ring des Nibelungen" tetraology. His last work was "Parsifal," given in 1882. The operas of his earlier period include "Tannhauser," "Lohengrin" and "The Flying Dutchman."

Wallace, Alfred Russel, born in England 1822, noted English naturalist. On July 1, 1858, he announced the theory of natural selection simultaneously with Charles Darwin.

Watt, James (born in Scotland 1736, died 1819), mechanician, inventor and engineer. He began experiments in improving the steam engine about 1760 and invented the condensing steam engine in 1765.

X

Xenocrates (436-314 B. C.), a Greek philosopher and the disciple of Plato; he succeeded Spensippus as head of the Academy of Athens, over which he presided for a quarter of a century.

Xenophanes, born in Asia Minor about 570 B. C., died about 480 B. C., founder of the Eleatic philosophy in Greece.

Xenophon (444-359 B. C.), the Athenian general and follower of Socrates, accompanied the Greek army under Cyrus the Younger in the march against Artaxerxes, and after Cyrus' death assumed the command of the Greek troops and conducted the famous five months' retreat through the mountainous hostile country to Trebizond. In his "Anabasis" he describes this expedition with graphic minuteness. In the war between Sparta and Persia he declared against his own country and was banished. Most of his works were written in the days of his exile at Scillus. He afterwards lived at Corinth. His chief works are "Anabasis," "Hellenica" and "Cyropaedia."

Z

Zoroaster is supposed to have lived in the fifth century B. C. As to his real personality, however, we have little but conjecture to go upon. The religious system which bears his name dates back to the days of ancient Persia, and is set forth in the "Avesta," the sacred writings of the Parsees, and in the "Gathas" (hymns). Only a few thousand Zoroastrians survive in Persia, but in India the sect is numerous. The idea of the theology of Zoroaster is that "Ormuzd" is the creative force of all that tends to goodness and happiness, and that Ahriman is the spirit of evil, these two powers being in eternal conflict in regard to the destinies of the human race.

HISTORY AT A GLANCE.

986. Herjulfson, first man to see the new world.
1001. Lief Erickson landed on New England coast.
1002. Thorwald brought a company to America.
1007. Thorfinn explored the coast from Massachusetts to Virginia.
1275. Marco Polo made a voyage to China.
1347. Norsemen made a settlement in what is now Rhode Island.
1492. Columbus discovered the West Indies.
1497. North American Continent discovered by the Cabots.
1512. Pacific Ocean seen by Balboa.
1536. Cartier founded Montreal.
1607. Settlement at Jamestown, Virginia.
1620. Landing of the Pilgrims at Plymouth.
1623. Dutch settlement on Manhattan Island.
1664. New Amsterdam taken by the English and named New York.
1682. Pennsylvania founded by William Penn.
1749. Slave trade encouraged by Parliament.
1752. Franklin proved lightning to be electricity.
1774. First Congress met at Philadelphia.
1775. Battles of Lexington and Concord.
1776. Declaration of Independence.
1781. A French fleet joined the Americans.
1783. Peace concluded.
1789. Washington inaugurated.
1812. War with England.
1814. Peace agreed upon at Ghent.
1840. Province of Canada formed.
1846. Beginning of Mexican War.
1848. Gold discovered in California.
1848. First Women's Rights Convention met in Rochester.
1860. Lincoln elected President.
1860. Secession of South Carolina.
1861. Jefferson Davis chosen President of the Southern Confederacy.
1861. Battle of Bull Run.
1862. Engagement of the Monitor.
1863. Emancipation Proclamation.
1864. General Grant made Commander-in-Chief.
1865. Surrender of Confederate General Lee.
1866. Atlantic cable laid.

1867. Alaska purchased from Russia.
1870. Right given to negroes to vote.
1872. The Modoc Indian War.
1873. Great financial panic.
1889. Great hurricane at Samoa Islands.
1895. Beginning of last Cuban Revolution.
1898. Destruction of the battleship Maine.
1898. War begun between United States and Spain.
1899. War between the United States and the Filipinos.
1900. United States currency placed upon a gold basis.
1902. Purchase of Panama Canal Company's rights for $40,000,000.
1902. Marconi sends first wireless message across the ocean.
1903. Pacific cable completed to Manila.
1905. The body of Commodore John Paul Jones brought from Paris and deposited at Annapolis, Md.
1906. Earthquake and fire destroy two-thirds of San Francisco.
1909. Commander Peary reached the North Pole.
1910. Monarchy overthrown in Portugal and Republic proclaimed.
1911. Italo-Turkish war over Tripoli.
1911. Revolution in China. Constitution granted.

LANGUAGE AT A GLANCE.

Baltic. Includes Lithuanian (from 1600), Lettish, and Old Prussian, which became extinct in 17th century.

Celtic. This includes Gaelic (Ireland); Erse (Scotland), and Manx (Isle of Man); Brythonic (Wales); Armorican, or Bas-Breton (Brittany). Gaelic dates from 7th century.

Davidian. This includes Tamil, Telegu and their sister idioms in Ceylon and Southern India.

English language is the descendant and representative of the Anglo-Saxon.

Hellenic, or **Greek.** The first of the numerous dialects of Greek was Old Ionic, or Epic; followed by the Æolic, the Doric, the New Ionic and the Attic. It is represented now by Romaic, or Modern Greek.

Iberian. Once the prevailing language of the Spanish peninsula, it now lives on the two sides of the Pyrenees, in the Basque.

Indic. The Sanskrit of the four Vedas, the sacred books of the Brahman religion, is more ancient than the common or classical Sanskrit. The latter had ceased to be the language of common life 300 B. C.

Iranian. To this belongs the Avestan; the Old Persian (cuneiform); the language of the Kurds, the Afghans and the Ossetes.

Italic. This includes Latin, akin to which were the Oscan and Umbrian of Central Italy. The modern descendants of Latin are the Romance languages—Italian, Spanish, Portuguese, Catalan, Provencal and French.

Ural-Altaic. Includes the numerous and widely different languages of the Manchus, the Mongols, the Turks, the Magyars and the Finns.

Semitic. Includes the Hebrew, Syriac, Arabic and Ethiopic, with their ancient and important literatures.

Slavic. From 900 A. D. The East and South Slavic includes Russian, Ruthenian, Bulgarian, Servian, Croatian and Slovenian. The West Slavic includes the Polish, Czech or Bohemian, the Lusatian or Wendish, and the extinct Polabian.

Teutonic, or **Germanic.** Includes the Norse, or Scandinavian, and the West Germanic. The High Germanic is the language of Upper or Southern Germany. The Low Germanic is spoken in Northern Germany and the Netherlands.

RELIGION AT A GLANCE.

Agnosticism. The doctrine that neither the nature nor the existence of God, nor the ultimate character of the universe, is knowable.

Animism. The belief that the soul is the vital principle, and is responsible for every organic development taught, by Stahl (1660-1734).

Babism. Doctrine of a modern sect in Persia, a mixture of Mohammedan, Jewish, Christian and Parsi elements.

Brahmanism. A later development of the early Vedic religion of the Aryan invaders of India.

Buddhism. Originally taught by Buddha, 600 B. C., the doctrine that release from existence (Nirvana) is the greatest good, and that unbelievers are doomed to endless rebirths.

Christianity. The belief in the revelation of God through Jesus Christ.

Confucianism. The teaching of the Chinese philosopher, Confucius (551-478 B. C.), that the source of all true devotion and morality is filial piety.

Euhemerism (300 B. C.). The theory held by Euhemerus that the gods of mythology were but deified mortals.

Fetishism. The worship of tangible inanimate objects believed to possess in themselves some kind of myserious power.

Gnosticism (100-600). A systm of thought that attempts to explain nature and man by a process of creation conceived as a series of effluxes flowing forth from the Godhead and forming the multiplicity of created beings.

Hegelianism. The philosophy of Hegel, which attempts to unite and harmonize the Greek ontology with the Kantian psychology.

Hinduism (India). The worship of elements, natural features and forces, deified men, ascetics, animals.

Jainism (India). The chief point of difference between Jainism and Buddhism is that the former rejects the doctrine of Nirvana.

Jansenism. The doctrine of Jansen (1585-1638), that man in his fallen condition is unable to do good, and that he is equally unable to resist the divine grace, through accession of which alone is salvation possible.

Judaism. The religious doctrines and rites of the Jews.

Mohammedanism. The doctrines of Mohammed, chiefly contained in the Koran; Islam.

Monotheism. The belief that there is but one God.

Neoplatonism (175-1200). A kind of pantheism developed from the Platonic dualism of Idea and Matter, under the influence of Jewish and Oriental conceptions.

Paganism. The worship of false gods. Idolatry.

Positivism. A philosophy originated by Comte, which excludes everything but the natural phenomenon of properties of knowable things.

Polytheism. The belief in a plurality of gods.

Protestant. Popularly, any Christian not of the Roman Catholic Church.

Roman Catholic Church. Its adherents hold that its first head was St. Peter, and that the popes are his successors. Papal supremacy and infallibility and the immaculate conception are the most distinctive features.

Shamanism. The belief that the unseen world of gods, demons and ancestral spirits is responsible only to the shamans or mediums.

Shintoism. Religion of the Japanese, consisting in the worship of the spirits of tribal ancestors and dead heroes.

Taoism (China). Taught originally by Lao-Tse, 600 B. C. The belief that contemplation and reason, avoidance of force and disregard of mere ceremonies are the means of regeneration.

Totemism. A class of natural phenomena or material objects—usually a species of animals or plants—between which and himself the savage believes that a certain intimate relation exists. A savage will never kill or eat his totem.

Vedic period of religion, displaying a vivid tendency to personify nature (1500-1000 B. C.).

Zoroastrianism. The religious system of Persia previous to the conversion of the Persians to Mohammedanism. Its sacred literature is the Zend-Avesta, teaching that Ormazd, the lord of light and goodness, carries on a ceaseless war against Ahriman and evil spirits (660-583 B. C.).

EDUCATION AT A GLANCE.

ROMAN

300 B. C. Largely moral, social and military.

300-146 B. C. Schools founded. Rhetoric, Greek, music, philosophy.

146 B. C.-100 A. D. Hellenised Roman education. Method of instruction chiefly imitation. Predominance of rhetoric.

MIDDLE AGES

500-1500. Rudiments of love, law, religion, courtesy, kindliness, generosity, formalities of conduct, ability to rhyme.

RENAISSANCE

700-800. Reading, writing, reckoning, grammar, dialectic, rhetoric studied.

1079-1142. Abelard, founder of conceptualism. Forerunner of universities.

1453. Printing, Gutenberg.

1500. From this time on educational changes were rapid. Platonic theory of contemplation substituted for the Heaven of monastic rules. A purer Aristotle studied. Individual and concrete Latin literature as opposed to scholastic conceptions.

1483-1546. Martin Luther. Education recognized necessary for all classes.

UNITED STATES

MASSACHUSETTS

1635. Boston established a Latin school.

1642. The General Court enacted laws for compulsory education.

1683. The General Court enacted that every town of more than 500 families or householders should set up and maintain two grammar schools and two writing schools.

1780. Constitution of Massachusetts framed and included a State system of education.

1789. School laws revised. Six months school enacted.

CONNECTICUT

1639. Schools established at Hartford and New Haven.

1633. First school established by the Dutch at New Amsterdam.

RISE OF UNIVERSITIES:

ROMAN-HELLENIC SCHOOLS

200 B. C., at Alexandria. Studies: Medicine, mathematics, grammar, Neo-Platonism and mysticism.

100 A. D., at Rome. Rhetoric, grammar, philosophy and law.

CHRISTIAN SCHOOLS

181. Pantaenus headed catechetical schools at Alexandria.

404. Cassian taught at Marseilles.

428. St. Benedict taught near Naples.

GREAT PUBLIC SCHOOLS

1393. Winchester founded by William of Wykeham.

1440. Eton founded by Henry VI.

1510. St. Paul's founded by John Colet.

1551. Shrewsbury.

1560. Westminster.

1567. Rugby.

1571. Harrow.

UNIVERSITIES

890. Oxford University founded by Alfred the Great.

915. Cambridge University (Eng.) founded.

1100. Irnerius taught at Bologna.

1100. William of Champeaux taught theology.

1113. Abelard became head of the Paris school.

1117-1121. Thibaut d'Estampes taught letters at Oxford.

1200. Bologna University has 10,000 students.

1206. University of Paris founded.

1222. Padua University founded.

1224. Frederick II constituted the University of Naples. Subjects: Arts, law, medicine and theology.

1282. Balliol founded.

1314. Exeter founded.

1326. Oriel founded.

1340. Queens founded.

1347. Prague founded.

1385. Heidelberg founded.

1409. University of Leipsic founded.

1636. General Court of Massachusetts founded College of Harvard.

1694. Halle founded.

1701. Yale founded.

1745. Pennsylvania University founded.

1746. Princeton founded.

1866. College of city of New York founded.

LAW AT A GLANCE.

B. C.

1015. Minos gives Crete his code of laws.
621. Draconian code formulated.
594. Solon's code supersedes that of Draco in Athens.
110. First sumptuary law at Rome.

A. D.

98. Jurisprudence flourishes in Rome.
290. The Gregorian Code.
435. Theodosian code published.
468. The principles of law established that the accused shall be tried by his peers, or equals.
482-565. Justinian, the codifier and reformer, revives legal activity.
559. The Saxon laws promulgated.
569. Written laws compiled by Visigoths in Spain.
600. The Roman Digest compiled.
617. Ethelbert publishes the first code of laws in England.
788. Pleadings in courts of justice first practiced.
850. Roman and common law introduced.
890. Trial by jury established.
900. County courts established.
1100. Roman law studied in Italian universities.
1140. Gracian collects the canon law.
1164. The Constitution of Clarendon formulated.
1168. Colleges of law at Paris.
1200-1400. Revival of study of Roman law.
1219. Teaching of civil law at University of Paris prohibited by Pope Honorius II.
1245. The great lawyer, Fieschi, better known as Pope Innocent IV, made provision for the teaching of Roman law at the Papal capital.
1267. The Statute of Marlborough declares "All persons, as well of high as of low estate, shall receive justice in the King's courts."
1285. Institution of the three great courts of law in England.
1300-1600. The Common Law of England during this period gradually grew out of custom.
1495. Roman law received in Germany.
1500. The Inns of Court at Westminster develop a body of logicians and a legal system founded on logic.
1583-1645. Hugo Grotius, author of great work on international law.

A. D.

1600. Lord Coke defines the jurisdiction of the common law courts. Royal prerogative is limited. Chancery is made a court of ordinary jurisdiction for equity.

1606. In the charter of Virginia James confers "all liberties, franchises and immunities" upon the colonists.

1608. The Calvin case is tried.

1690. The most famous theory of modern politics, that of the Original or Social Compact, became conspicuous.

1750. After being dormant for 150 years, the vital power of common law is reasserted.

1758. English law taught at Oxford.

1790-1859. John Austin founds the modern science of jurisprudence.

1900. Germany adopts the new imperial law code.

LITERATURE AT A GLANCE.

B. C.

2000-1500. Earliest Vedic hymns in Sanskrit.
2000. Chaldeans' account of the Deluge. Hieroglyphic inscriptions on monuments.
1500-1000. Great Egyptian library founded.
1000-500. Dramas, tales, fables and epigrams abound. Age of Confucius and period of great literary activity.
900. Homer writes Iliad, Odyssey.
484-424. Herodotus compiles History.
495-406. Euripides and Sophocles write tragedies.
427-347. Plato writes his dialogues.
384-322. Aristotle writes his philosophy.
100-44. Julius Cæsar prepares his Commentaries.
106-43. Cicero's Essays and Letters.
65-8. Horace's Odes and Satires.
59 B. C.-17 A. D. Livy writes History of Rome.

A. D.

3-65. Seneca prepares treatise on ethics.
72. Suetonius' "Lives of the Cæsars."
1214-1294. Roger Bacon.
1313-1375. Boccaccio (Decameron).
1469-1527. Machiavelli.
1483-1533. Francois Rabelais' philosophy and satire.
1564-1616. William Shakespeare.
1608-1674. John Milton (Paradise Lost).
1633-1703. Samuel Pepys (Diary).
1661-1731. Defoe (Robinson Crusoe).
1667-1745. Jonathan Swift (Gulliver's Travels).
1688-1772. Swedenborg.
1706-1790. Benjamin Franklin.
1707-1754. Henry Fielding (Tom Jones).
1720-1797. Baron von Munchausen.
1724-1804. Immanuel Kant's philosophy.
1728-1774. Oliver Goldsmith (Vicar of Wakefield).
1737-1794. Edward Gibbon (Decline and Fall of the Roman Empire).
1744-1803. Herder's philosophy.
1547-1616. Miguel de Cervantes Saavedra (Don Quixote).
1749-1832. Goethe.
1758-1843. Noah Webster (Dictionary).
1766-1817. Madame de Stael.
1770-1850. William Wordsworth (Poems).

A. D.

1771-1832. Sir Walter Scott (Waverly Novels).
1783-1859. Washington Irving.
1785-1859. Thomas De Quincey (Confessions of an Opium Eater).
1785-1863. Jakob Grimm.
1788-1824. Lord Byron (Poems).
1789-1851. James Fenimore Cooper.
1795-1881. Thomas Carlyle (French Revolution).
1802-1885. Victor Hugo.
1803-1870. Alexander Dumas.
1803-1873. Sir E. Bulwer Lytton (Last Days of Pompeii).
1803-1882. Ralph Waldo Emerson.
1804-1864. Nathaniel Hawthorne.
1807-1865. H. W. Longfellow (Poems).
1805-1875. Hans Christian Anderson writes his Fairy Tales.
1809-1892. Alfred Tennyson (Poems).
1809-1894. Oliver Wendell Holmes (Autocrat of the Breakfast Table).
1809-1894. Edgar Allen Poe (The Raven).
1811-1896. Harriet Beecher Stowe (Uncle Tom's Cabin).
1811-1862. William M. Thackeray (Vanity Fair).
1812-1870. Charles Dickens (David Copperfield).
1816-1855. Charlotte Bronte (Jane Eyre).
1819-1900. John Ruskin (Stones of Venice).
1819-1880. George Eliot (Silas Marner).
1828-1905. Jules Verne.
1835-1910. Samuel L. Clemens (Mark Twain).
1837-1909. Swinburne (Poems).
1838-1901. Walter Besant (London novels).
1840-1902. Emile Zola.
1840-1897. Alphonse Daudet.
1850-1893. Guy de Maupassant.
1850-1894. Robert Louis Stevenson (Child's Garden of Verses).

ART AT A GLANCE.

B. C.

2100. Sculpture and painting first employed.
772. Sculpture first mentioned among the Egyptian arts.
568. School of sculpture opened at Athens.
540. Corinthian order of architecture invented by Calimachus.
——. Appelles, celebrated Greek painter of "Venus Asleep."
335. Caustic art invented.
290. Fabius introduces painting at Rome.

A. D.

80. The group of the Laocoon.
120. The Roman mosaics.
493. Theodoric introduces Greek architecture into Italy.
1276-1336. A. B. Giotto painted frescoes at Assisi, and probably founded the modern school of portrait painting.
1285. Cimabue, the first of modern painters, at Florence.
1300. Rapid advances in civilization, revival of ancient learning, improvements in arts.
1386. Jan Van Eyck invented oil painting.
1425. Arts promoted in Italy.
1447-1515. Alessandro Botticelli, Italian, painted pictures in Vatican chapel.
1452-1519. Leonardo da Vinci, eminent Italian painter, anatomist, astronomer, botanist, mathematician, musician and engineer.
1460. Wood engraving invented.
1475-1564. Michael Angelo, distinguished painter, sculptor, architect and poet, of Italy.
1483-1520. Raphael Sanzio, Italian painter and architect, adorned walls of Vatican with frescoes.
1494-1534. Correggio founded the Lombard school of art. Religious subjects.
1573. Titian, colorist painter.
1577-1640. Peter Paul Rubens, Flemish painter, the most rapid in execution of all the great masters.
1599-1641. Sir Anthony Van Dyck, Flemish painter, court painter to Charles I of England.
1599-1660. Velasquez, distinguished Spanish painter.
1671. Foundation of the Academy of Architecture at Paris.
1723-1792. Sir Joshua Reynolds, the greatest portrait painter of his day.
1822-1899. Rosa Bonheur, French painter, "The Nivernais Ploughing."
1834-1903. J. A. M. Whistler, celebrated etcher and painter.
1868. Lawrence Alma-Tadema paints "Phideas and the Elgin Marbles."

PHILOSOPHY AT A GLANCE.

B. C.

600. Epimenides, Solon and Thales, philosophers, three of the "Seven Wise Men" of Greece.
522. Confucius, the Chinese philosopher.
500. Anaxagores, advocate of Ionic philosophy.
500. Pythagoras founds a school of philosophy.
469-399. Socrates, Athenian philosopher.
429-347. Plato, Greek philosopher.
384-322. Aristotle writes his philosophical works.
360. Philippics of Demosthenes delivered.
342-270. Epicurus founded Epicurean School of Philosophy.
4 B. C.-65 A. D. Seneca, Moralistic Essays.

A. D.

235. Alexandrian School of Philosophy founded.
1055. First age of scholastic philosophy.
1120. Scholastic philosophy reaches a high point under Abelard.
1158. Colleges of theology and philosophy at Paris.
1483-1553. Francois Rabelais.
1568-1639. Tommaso Campanella.
1596-1650. René Descartes.
1623-1662. Blaise Pascal.
1762-1814. Johan Gottlieb Fichte.
1724-1804. Immanuel Kant, Philosophy, Critic of Pure Reason.
1744-1803. T. G. Von Herder.
1770-1831. Georg W. F. Hegel.
1768-1834. F. D. Schleiermacher.
1788-1860. Arthur Schopenhaur.
1870-19—. Edouard Zeller.

NATURE AT A GLANCE.

1707-1778 Carl von Linne. His gift of botany enriched knowledge and opened the way for the rest of the natural sciences.
1726-1797. Hutton. Science of the rocks.
1743-1794. Lavoisier discovered the indestructibility of matter.
1761-1849. Albert Gallatin classified American Indians on the basis of language.
1769-1838. Cuvier Brothers gave form and substance to zoology and presaged anthropology.
1809-1882. Charles R. Darwin defines the development of species.
1818-1889. James P. Joule measured the mechanical equivalent of heat and experimentally demonstrated the persistence of motion.
1820-1893. John Tyndall establishes the uniformity of nature.
1822-1892. John Strong Newberry, American geologist.
1825-1895. Thomas Henry Huxley, English biologist, advocate of Darwinian evolution.
1830-1833. Sir Charles Lyell published "Principles of Geology," substituting the Huttonian doctrines for the old "catastrophic" theory, thus making geology a science.
1834-1902. Major J. W. Powell, American geologist and ethnologist.
1896. A. Gaudry determines the age of fossils.

PSYCHOLOGY AT A GLANCE.

B. C.

550. The Sophistic movement, out of which the first race-psychologist, Socrates, was born.

500. Heraclitis taught the principle, or ultimate nature, of all things is ethereal fire.

500. Parmenides, the Greek, assumed reality to be indeterminate or absolute being.

400-362. Democritus advances his atomic theory.

429-347. Plato advances doctrine of matter.

384-322. Aristotle makes valuable contributions to empirical psychology.

A. D.

1632-1637. B. de Spinoza taught that the universe is formed of one substance, which is God, and in which mind and physical reality inhere as two of a possible infinity of attributes correlated by their mutual dependence upon the one divine being.

1632-1704. John Locke, author of "Essay on the Human Understanding."

1637. Rene Descartes published his "Method of Reasoning and Investigating Scientific Truth."

1711-1776. David Hume treats mind as a part of nature, and endeavors to discover the laws of mental change.

1744-1829. Lamarck, pioneer in genetic psychology, founder of the theory of evolution in its modern sense, as opposed to the separate creation of species.

1801-1887. G. T. Fechner deduces the law that the intensity of sensation increases as the logarithm of the stimulus.

1809-1882. Charles R. Darwin, whose work on the Origin of Species worked a revolution in biological science.

1817-1881. Rudolf Hermann Lotze, pioneer in experimental psychology, author of "Medical Psychology."

SCIENCE AT A GLANCE.

B. C.

2234. Astronomical observations begun at Babylon.
2095. Geometry first used.
721. First eclipse of the moon observed by the Chaldeans at Babylon.
640. Spherical form of earth and true cause of lunar eclipses taught by Thales, who also discovered the electricity of amber.
336. Eclipses calculated by Calippus, the Athenian.
300. Euclid, the celebrated mathematician.
162. Hipparchus fixes the first degree of longitude and latitude; founds trigonometry.
150. Hipparchus makes a catalogue of the stars.
79. Posidonius calculates the height of the atmosphere.

A. D.

138. Ptolemy issued the *Almagest,* which for 1400 years constituted the principal and almost the sole authority of astronomy.
941. The figures of arithmetic brought into Europe by the Saracens.
964. Abd-al-rahman, Persian astronomer, re-observed Ptolemy's stars and noted differences.
1150. Magnetic needle known in Italy.
1302. Mariner's compass invented at Naples.
1590. Telescopes invented by Jansen.
1590. Napier invents logarithms.
1606. Gilbert's electrical discoveries.
1626. Kepler's laws discovered.
1687. Telegraph invented.
1750. Franklin's discoveries in electricity.
1796-1799. Sir William Herschel published in Philosophical Transactions four catalogues covering two-thirds of sky visible in England.
1844. Argelander modified Herschel's method by using numbers instead of punctuation points in studying variable stars.
1877. Telephone invented by Bell.
1902. Marconi wireless invented.
1908. Discoveries in the transmutation of metals.
1909. Great progress in aeronautics.
1910. Revolution in Portugal. Republic proclaimed.
1911. Italo-Turkish war over Tripoli.
1911. Revolution in China. Constitution granted.

PHYSICS AT A GLANCE.

B. C.

916. The Rhodians begin navigation laws.

610. Pharaoh-Necho sent out a Phenician fleet, which circumnavigated Africa.

328. Voyage of Nearchus from the Indies to the Euphrates.

300. Eratosthenes measured the size of the earth with great accuracy.

267. Ptolemy makes a canal from the Nile to the Red Sea.

A. D.

78. Circumnavigation of Scotland.

1254-1323. Marco Polo, the great explorer of Cathay, unveiled the wonders of the East.

1492. Columbus, seeking a western route to the Indies, discovers America.

1502. Nunez de Balboa discovers the Pacific Ocean.

1522. Circumnavigation of the globe by Magellan.

1700. Meteorological instruments invented.

1728-1779. Captain James Cook explored Australia and opened it to English colonists.

1821-1894. Von Helmholtz, German physicist, author "Sensations of Tone."

1856. First weather reports sent out from a central office.

1871. The first observatory upon a mountain peak established upon Mount Washington, N. H.

1888. Balloon ascents in Germany for ascertaining conditions of the free air.

1894. Kites used at Blue Hill Observatory, Boston, to lift self-recording instruments and obtain graphical records of meteorological elements in the free air.

1909. Shackleton reached within 120 miles of the South Pole.

1909. Peary reaches the North Pole.

1911. Prince of Monaco endows Oceanographic Institute, of Paris, for oceanographic research.

MEDICINE AT A GLANCE.

B. C.

460-359. Hippocrates, the "Father of Medicine," substituted experimental for speculative theories.

293. Esculapius, the God of Medicine, worshipped by the Romans.

219. Art of surgery introduced.

A. D.

9. Celsus, the first practitioner of medicine in Rome.

131-208. Galen, the first physician to apply the experimental method to physiology.

980-1037. Avicenna, the most celebrated of Arabian physicians.

1493-1541. Paracelsus instituted a system of medicine in opposition to those of Galen, Hippocrates and Aristotle, and claimed to have discovered the elixir of life.

1509-1590. Ambroise Paré first introduced the ligature of arteries in lieu of cauterization.

1545. Vesalius makes important contributions to study of anatomy, which marked the beginning of scientific medicine.

1617. Harvey made his discovery of the circulation of the blood, which, before this, was believed to be stationary in the veins.

1661. Malpighi discovered the capillary system.

1668-1738. Boerhaave introduced Clinical instruction.

1728-1793. John Hunter discovered the healing of wounds by blood-clot and the ligation of the vessels in their continuity.

1743-1794. Lavoisier, founder of the modern school of chemistry.

1798. Jenner discovered and introduced vaccination through accidental inoculation of milch cows with small-pox.

1815. Laennec invented the stethoscope.

1844. William Morton first administered ether to a patient, and thus proclaimed discovery of anesthesia.

1845. Metchnikoff, zoologist and bacteriologist.

1850. L. Avenbrugger discovered percussion as a means of diagnosis of the diseases of large organs.

1850. Virchow published "Cellular Pathology."

1857. Pasteur demonstrated that fermentation and putrefaction were caused by bacteria in the air. Discovered a method of inoculation.

1870. Lord Lister discovered antiseptic surgery..

1880. Koch identified germs of cattle disease, consumption and cholera, and in 1890 made a lymph for the cure of consumption.

1896. Wilhelm Konrad Rontgen demonstrated that the Rontgen Rays would pass through the human body and throw a shadow picture on a photographic plate—one of the greatest discoveries in the science of surgery.

1897. Finsen light discovered; used for the cure of cutaneous disease, notably lupus.

TECHNOLOGY AT A GLANCE.

B. C.

2247. Bricks made and cement used to unite them.
441. Battering ram invented.
320. First work on mechanics written by Aristotle.
310. Aqueducts and baths in Rome.
224. Archimedes makes known his discoveries in mechanics.
140. Clock wheels invented by Ctesibius.

A. D.

493. Theodoric introduces Greek architecture into Italy.
1326. Clocks constructed on mathematical principles.
1477. Watches made at Nuremberg.
1530. Torgens invents the spinning wheel for flax.
1620. Thermometers invented by Drebel.
1654. Air pumps invented.
1774. Steam engines improved by Watt and Bolton.
1786. Stenography invented by Taylor.
1801. Iron railways in England.
1807. Fulton invents the steamboat.
1808. Lithography invented.
1814. Steam carriages in England.
1836. Founding of the Smithsonian Institution.
1847. Sewing machine invented.
1851. Daguerre makes important contributions to photography.
1855. Bessemer's steel process patented.
1888. Typesetting machine perfected.
1905. Gigantic power plants erected at Niagara Falls.

ECONOMICS AT A GLANCE.

1694-1774. Francois Quesnay founded a system of political and economic doctrines based on the supremacy of natural order. His followers were called Physiocrats, and emphasized the powers of nature as the source of public wealth and national prosperity.

1711-1776. David Hume, author of "Essays, Moral, Political and Literary."

1723-1790. Adam Smith, author of "The Wealth of Nations," in which he maintains that labor is the main source of a country's wealth, and that free trade is more conducive to national prosperity than protection of home manufactures.

1748-1832. Jeremy Bentham, English politician and jurisprudential writer.

1766-1834. Thomas Robert Malthus, English political economist.

1772-1823. David Ricardo, author of "Principles of Political Economy and Taxation," containing his famous theory of rent.

1806-1873. J. S. Mill, author of "The Principles of Political Economy."

1823-1875. J. E. Cairnes wrote "The Logical Method of Political Economy" and other treatises marked by severe precision of argument.

1842- Professor A. Marshall, political economist.

1850- Hedonism, in modern times a term applied to utilitarianism, seeking the greatest good in the greatest happiness of the community as a whole.

DIPLOMACY AT A GLANCE.

1583-1645. Hugo Grotius, Dutch jurist and author of "International Law."

1689-1755. Charles deS. Montesquieu, author of "The Spirit of Laws," in which he discusses with great ability the principles of political science.

1708-1778. William Pitt, Earl of Chatham; Prime Minister of England, 1766. Swayed the destinies of his country with great courage and energy.

1759-1806. William Pitt, eminent English statesman; Premier, 1783. Reconstructed the East India Company.

1770-1827. George Canning; 1822, Foreign Secretary of England. A liberal statesman; largely contributed to the overthrow of Napoleon.

1773-1859. Prince von Metternich, great Austrian diplomatist who exercised a powerful influence upon the cabinets of Europe.

1784-1865. Lord Palmerston, three times Foreign Minister and twice Premier of England. Obtained the highest distinction as an administrator.

1805-1859. A. C. H. C. De Tocqueville, eminent French statesman, author "On Democracy in America."

1805-1881. Benjamin Disraeli (Earl Beaconsfield), famous English statesman; twice Prime Minister of England.

1809-1865. Abraham Lincoln, sixteenth president; emancipator of the negro; saviour of the Union.

1809-1898. W. E. Gladstone, Prime Minister of England, 1868 and 1880. During his term of office he succeeded in establishing what is nearly universal suffrage in England.

1810-1861. Count C. di Cavour, eminent Italian statesman who brought about the regeneration of Italy by the treaty of Villa Franca in 1857.

1815-1898. Prince von Bismarck, one of the greatest statesmen of the nineteenth century. Prime Minister of Prussia, 1862; Chancellor of German Confederation, 1867; brought about a coalition of the German powers against France, 1870.

1838- James Bryce, ambassador to United States, 1906; author "The American Commonwealth."

SOCIOLOGY AT A GLANCE.

1746-1827. J. H. Pestalozzi established institution for deserted children at Neuhof, 1798; practiced "intuitive" system.
1766-1834. Thomas R. Malthus, author "Essay on Population."
1770-1831. G. W. F. Hegel, professor of philosophy who attempts to combine the real and the ideal.
1779-1861. F. K. von Savigny, German jurist.
1780-1847. Thomas Chalmers, professor of moral philosophy.
1806-1873. John Stuart Mill, social philosopher.
1816-1895. Von Gneist, German jurist and political writer.
1817-1894. Wilhelm Roscher, German economist.
1818-1881. L. H. Morgan founds inductive sociology by observing institutions of Americian Indians.
1820-1903. Herbert Spencer, author of "Social Statics" and "The Study of Sociology."
1835- Adolph Wagner, German writer on political economy.
1836-1909. Cesare Lombroso, "Criminal Man."
1840-1909. Carroll D. Wright, "Outlines of Practical Sociology."
1850-1898. Edward Bellamy, "Looking Backward."
1858- Benjamin Kidd, "Social Evolution."
1860- Jane Addams, "Philanthropy and Social Progress."
1862- E. A. Westermarck, Finnish sociologist.
1887- Emil Munsterberg, sociological works.
1900- John R. Commons, "The Family."
1900- Aug. Bebel, "Die Frau and der Sozialismus."
1902- Dr. Thomas D. Wood, "Some Controlling Ideas of the Family Life in the Future."
1902- C. R. Henderson, author "Practical Sociology in the Service of Social Ethics."

MUSIC-DRAMA AT A GLANCE.

B. C.

1580. The cymbal used at the feasts of Cybele.
1506. The flute invented by Hyagnis, a Phrygian.
1370. Music and poetry cultivated in Greece.
670. Terpander of Lesbos invented the seven-stringed kithara.
562. First comedy acted at Athens.
535. Thespis performs first tragedy at Athens.
525-456. Æschylus, eminent Greek tragedian.
495-406. Sophocles, a famous Athenian tragic poet.
483. Etrurians excel in music and drama.
480-406. Euripides, Greek tragedian.
22. Pantomimic dances introduced on the Roman stage.

A. D.

300. Pope Sylvester instituted a singing school in Rome.
374-397. St. Ambrose, Archbishop of Milan, took especial interest in the culture of church music.
590-604. Gregory the Great restored to church song that solemnity of character which it had greatly lost.
764-814. Charlemagne founded music schools at Metz and other towns, and placed them under Italian singers of note.
895-900. Beginning of modern harmony.
950-1050. Guido effected many improvements in the system of notation.
1024. Musical scale of six notes invented by Guido Aretius.
1200. Franco of Cologne regulates measure in music and formulates some of the fundamental laws of modern harmony.
1330. Jean de Meurs introduces florid counterpoint.
1450. Josquin des Pres, first genius in musical history, born.
1458. Dunstable, "father of English contrapuntists," dies.
1470. Beerhard invents organ pedal.
1475. The Mastersingers flourish in Germany.
1483-1546. Luther introduced the Chorale, from which our first modern hymn-tune is undoubtedly derived.
1502. Invention of movable metal types for printing music.
1523-1585. John Merbecke set the English Liturgy to a plain song.
1514-1594. Palestrina effects a complete revolution in the style of musical composition for the church.
1543-1623. Wm. Byrde, composer of the famous "Non Nobis Domine."
1564-1616. William Shakespeare, the greatest of English dramatic poets.
1580. The origin of the opera. The ancient Greek art of musical and dramatic declamation is revived at Florence.

1594. The first opera, "Dafne," is produced.

1560-1625. Ludovico Viadana composed the first concerto and solo songs for the church.

1580-1675. Giacomo Carissimi gave a pronounced form to oratorio.

1622-1673. Moliere, greatest of French comic dramatists.

1627. Opera introduced into Germany by Schultz.

1658-1695. Henry Purcell, syled "the greatest English musical genius," organist of Westminster Abbey, composer of "Dido and Æneas."

1659. Alessandro Scarlatti, founder of the Neapolitan School, born.

1685-1750. J. H. Bach, almost unrivaled as an organist. 1724, produced "St. John Passion;" 1729, "St. Matthew Passion."

1685-1759. Handel, the greatest composer of oratorio music. 1731, produced English oratorio, "Esther."

1692. First opera in London.

1710. Pianoforte invented by Cristofori.

1732-1809. Joseph Haydn, father of the sympohny. His greatest work, "The Creation."

1756-1791. Mozart, German composer, author of many masses, symphonies and concertos. His greatest work, "Don Giovanni."

1770-1827. Beethoven, eminent German composer, author of numerous symphonies. Called the "most universal musical genius the world has ever produced." His greatest works, "Battle Symphony," "Pastoral Symphony," and "Fidelio."

1792-1868. Rossini, the greatest of Italian opera composers. His masterpiece, "William Tell."

1794-1864. Jacob Meyerbeer, German-Jewish composer. His greatest works, "Robert Le Diable," "The Huguenots," "Le Prophete."

1797-1828. Franz Schubert. His songs and ballads rank among the most exquisite of their kind. Greatest works, "Lisder" and "Wanderer."

1797-1848. Donizetti, Italian musical composer. His most popular operas are, "La Favorita," "Daughter of the Regiment," "Lucia di Lammermoor," "Don Pasquale."

1802-1835. Vincenzo Bellini, Italian musical composer. His greatest opera, "La Somnambula."

1809-1847. Mendelssohn-Bartholdy. German musical composer. His greatest works, "Overture to the Midsummer Night's Dream," "Elijah" (oratorio).

1810-1849. Frederic Chopin, Polish pianist, composer of concertos.

1813-1883. Richard Wagner, German composer. His greatest operas, "Tannhauser," "Rienzi," and "Lohengrin."

1814-1901. Verdi, Italian musical composer. His best known operas are, "Rigoletto," "Il Trovatore," "La Traviata."

1818. F. C. Gounod, French composer. His chief opera, "Faust."

1828-1906. Henrik Ibsen, Norwegian dramatist. His greatest works, "Brand," "Peer Gynt," "The Pillars of Society," "The Doll's House," "Ghosts."

1833-1897. Johannes Brahms, German composer. His greatest work, "Deutsches Requiem."

1860—. Paderewski, famous Polish pianist and composer.

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The Treasury of Facts

THIS reference matter has been compiled as a special aid to the different courses, and will be found invaluable to members and their children at school. There are many subjects constantly arising in conversation and in general reading upon which many of us have but little definite knowledge. When we consult the large encyclopædias, we either do not find these particular subjects at all, or they are treated so exhaustively or technically that it is impossible for the average reader to grasp their meaning. So we have made up here a collection of short articles on these subjects, selected with considerable care, and written in language that may be understood by readers of all ages.

HISTORY.

Decisive Battles.

B. C.

490 *Marathon.*—The Greeks, under Miltiades, defeated the Persians, under Darius. Free government preserved.

413 *Syracuse.*—The Athenians defeated by the Syracusans and their power broken.

331 *Arbela.*—The Persians defeated by the Macedonians and Greeks, under Alexander the Great. End of the Persian Empire.

207 *Metaurus.*—Romans defeated Hannibal, and overthrew Carthage.

31 *Actium.*—The combined fleets of Anthony and Cleopatra defeated by Octavius, and imperialism established in the person of Octavius.

A. D.

9 *Winfeld-Lippe.*—Teutonic independence established by the defeat of the Roman legions under Varus at the hands of the Germans under Arminius.

451 *Chalons.*—The Huns, under Attila, called the "Scourge of God," defeated by the confederate armies of Romans and Visigoths, under Aetius.

732 *Tours.*—Charles Martel overthrew Saracens and Christendom rescued from Islam.

1066 *Hastings.*—Harold, of England, defeated by William the Conqueror, and a new regime established in England by the Normans.

1429 *Orleans.*—Siege of city raised by Joan of Arc, and independence of France secured.

1588 *Armada.*—England saved from Spanish invasion by sinking the great Spanish fleet.

1704 *Blenheim.*—The French and Bavarians, under Marshal Tallard, defeated by the English and their allies, under Marlborough.

1709 *Pultowa.*—Charles XII, of Sweden, defeated by the Russians, under Peter the Great, and stability of Moscow Empire established.

1777 *Saratoga.*—Critical battle of the American War of Independence. The English defeated by the Americans under General Gates.

1792 *Valmy.*—Army of Prussians, Austrians and the Allied Armies, under the Duke of Brunswick, defeated by the French, under Kellermann. The first success of the Republic against foreigners.

1805 *Trafalgar.*—On the 21st of October the great naval battle of Trafalgar was fought. The English defeated the French and destroyed Napoleon's hopes to successfully invade England.

1815 *Waterloo.*—The French, under Napoleon, defeated by the allied armies, under Wellington.

1863 *Gettysburg.*—The deciding battle of the War for the Union. Confederates, under General Lee, defeated by Union forces, under Meade.

1870 *Sedan.*—The decisive battle of the Franco-German War.

1898 *Santiago.*—Admiral Cervera's fleet of war vessels completely destroyed by American fleet under Sampson and Schley.

1905 Annihilation of Russian fleet by Japanese.

LANGUAGE.

Origin of Familiar Words and Phrases.

AMBITION—Strictly speaking, ambition means "the going from house to house." Latin, *ombito,* going about canvassing. In Rome before an election, candidates used to call at the different houses to solicit votes, and these so doing were ambitious of office.

APRIL FOOL.—French*un posson d' Avril,* Scotch a gorok, (cuckoo). In Hindustan similar tricks are layed at the Huli Festival, March 31. Hence the practice cannot refer to the uncertainty of the weather nor to the mockery trial of our Saviour, as popularly explained. Another and better solution is this: As March 25 used to be New Year's Day, April 1 was its octave, when its festivities culminated and ended.

ARGUS-EYED—Jealously watchful. According to the Grecian fable, Juno being jealous of Io, had her constantly watched by Argos, who had 100 eyes.

BACK-STAIR INFLUENCE—Unrecognized influence. Royal palaces were formerly built with a staircase for state visitors, and another for those desiring to see the sovereign privately. Hence it was desirable to be in favor with the guardians of the back-stairs, who could admit or exclude one as they chose.

BETE NOIRE—Any object of aversion. The thorn in the flesh, the black sheep. A black sheep is considered an eye-sore in a flock and its wool of less value. In times of superstition it was looked on as bearing the devil's stamp.

BLUE STOCKING—A literary woman. In 1400 a society of ladies and gentlemen was formed at Venice, dis-

tinguished by the color of their stockings, and called della calza. In Paris it made its appearance in 1590, when it became popular among the female savants. It came into notice in England in 1780, and was kept up until 1840, up to the time of the death of its last supporter, Miss Monckton, the Countess of Cork.

BO OR BOH—A fierce captain of the Norsemen whose name his soldiers used on going into battle. From this comes the word bogie, a hobgoblin, or Little Bo. "You cannot say Bo: to a goose," implying you are a coward not even daring to say Bo: to a simpleton. Ben Johnson was presented to a nobleman, who was so struck with his homely appearance that he said: "What: are you Ben Johnson? Why you look as if you could not say Bo: to a goose." Whereupon the witty dramatist exclaimed Bo: making his best bow to the disconcerted peer.

BONFIRE.—A fire made as an expression of public joy for amusement; a beacon-fire. (Welsh, ban, a beacon, banffage, a lofty blaze; Danish, baun; Scotch, bane-fire.) Bone is the more ancient orthography of the first syllable, which substantiates the belief that the word means a fire of bones. "In the worship of St. John the people made three fires; one was of clean bones and no wood, and is called a bone-fire; another of wood and no bones, and that is called a wood-fire, and the third is made of wood and bones, and is called 'St. John's Fire.'"—Quator Sermones, 1499. This refers to Ascension Day.

BRIDE OF THE SEA.—Venice was so called from the ancient ceremony of throwing a ring into the sea by the doge, who said, "We wed thee, O Sea, in token of perpetual domination."

CATCH A TARTAR.—To be outdone. An Irish soldier, in a battle against the Turks, shouted to his com-

manding officer that he had caught a Tartar. "Bring him along then," said the general. "But he won't come." "Then come along yourself." "Arrah! an' so I would, but he won't let me," answered Paddy.

CHURCH.—(Welsh, cyrch; Fr., cirque; Scotch, kirk; Greek, kirkos.) The etymology of the word is generally supposed to be from the Greek *kurion oikos* (house of God), but this is improbable, as the word was found in all the celtic languages long before the introduction of Greek. The meaning is probably "a circle." The places of worship among the Germans and Celts were always circular; as, for instance, the cromlechs of Stonehenge, the dolmens of Brittany, and relic shrines of India.

CRESCENT.—According to tradition, "Philip, father of Alexander, meeting with great difficulties in the siege of Byzantium, set the workmen to undermine the walls, but a crescent moon discovered the design, which miscarried; consequently the Byzantines erected a statue to Diana, and the crescent became the symbol of the State." By another legend, Othman, the sultan, saw in a vision a crescent moon, which grew until it reached from east to west, whereupon he adopted the crescent for his standard.

DOMESDAY BOOK.—A book compiled by order of William the Conqueror, containing a survey of all the lands of England, their ownership, etc. So called from having been kept in a part of Winchester Cathedral, called Domus Dei; or more likely it refers to surveys made by the Saxon kings, and called Dom-bocs.

EAGLE.—Is chosen to support the lectern, or reading-desk, in churches, because the eagle is the natural enemy of the serpent. The two Testaments correspond to the outspread wings of the eagle. In royal banners, we find it as the ensign of the ancient kings of Babylon and Persia, of

the Ptolemies, Seleucides, and Romans. The French, under the empire, adopted the same device. The two-headed eagle signifies a double empire, assumed by Austria, which claims to be the successor of the Caesars and Charlemagne; in 802 the second head was added to her standard, on the union of Rome and Germany. Russia, by virtue of uniting Poland to her possessions, has the same emblem. It was first used by Constantine. The golden eagle and the spread eagle descend to us from the Crusades, where they were first employed by the emperors of the East.

FATHER OF HIS COUNTRY. Cicero was so styled by the Romans; also several of the Caesars; Cosmo de Medici, (1389-1464), George Washington, (1732-1799); Andrea Dorea by the Genoese, (1468-1560); and Andronicus Palaeologus II., Roman Emperor, assumed the title, (1260-1332).

FATHER OF THE PEOPLE.—Louis XII, of France (1498-1515); Henry IV of France, (1598-1610); Christian III of Denmark, (1534-1559); Gabriel du Pineau, a French lawyer, (1573-1644).

FINGERS. As anciently known are:

Thumb.
Toucher, forman or pointer.
Long-arm, or long finger.
Lich-man, or ring finger.
Little-man, or little finger.

The Romans believed that a nerve ran through the ring finger to the heart. Both they and the Greeks called it the medical finger and used it for stirring their mixtures, believing that nothing harmful could touch it without dispatching a warning to the heart.

FLEURS DE LYS. The royal insignia of France, variously conjectured as the head of a javelin, a bee flying,

or the flower of the iris. The latter opinion prevailed in the time of Louis VII, (1137-1180), who accordingly adopted it, and the national standard was covered with these flowers. Charles VI, in 1635, reduced the number to three, the mystical church number. From the ornaments resembling bees found in the tomb of Childeric, father of Clovis, it has been thought that the device was in reality a "bee flying," but it is now generally believed that these were merely the decorations of horse trappings, and independent of this emblem.

FUNERAL BANQUETS. The Romans handed down the custom of giving a feast at funerals. Besides feasting the friends of the deceased, they furnished entertainment to those employed.

HORN-BOOK. A thin oak board about nine inches long and six wide, containing the alphabet, nine digits, and Lord's Prayer. A thin sheet of horn covered it to keep it clean and a picture of St. George and the Dragon embellished the back. A narrow frame of brass held together the board and its horn.

JACK HORNER. A tradition in Somersetshire makes the abbot of Glastonbury send a princely bribe to Henry VIII by his steward, Jack Horner, which was a pie containing the transfer deeds of twelve manors. Jack, raising the crust, purloined the deed of the manor of Wells, which he presented to the king. Hence in the nursery rhyme:

"He put in his thumb
And pulled out a plum, (the title deed,)
Saying, 'What a brave boy am I!' "

MOURNING:—

Black. The color of mourning in Europe, also in ancient Greece and Rome.

Black and white striped. Expressive of sorrow and hope combined; worn by the South Sea Islanders.

Grayish brown. The color of the earth; worn in Ethiopia.

Pale brown. The color of withered leaves; worn in Persia.

Sky-blue. Expressive of hope for the deceased; worn in Syria, Cappadocia and Armenia.

Deep blue. The mourning of Bokhara, in central Asia; worn also by the Romans under the republic.

Purple and violet. Denotes royalty; worn for cardinals and kings of France. Violet is the mourning of Turkey.

White. Mourning of China. Henry VIII wore white for Anne Boleyn. Until 1498 it was the mourning of Spain.

Yellow. Mourning worn in Egypt and Burmah. Anne Boleyn wore yellow for Catherine of Arragon. Yellow may be regarded as a token of exaltation.

MUSEUMS. The most famous are the British Museum, London; the Louvre, Paris; the Vatican, Rome; the museums of Berlin, Dresden, Florence, Munich, St. Petersburg and Vienna; Natural History Museum and Metropolitan Museum of Art, New York.

NEITHER RHYME NOR REASON. Sir Thomas More, Chancellor in the time of HenryVIII, advised the author of a book submitted to him for criticism to turn it into rhyme. Having done so, the satirist replied, "That will do. 'Tis rhyme now, but before it was neither rhyme nor reason."

PASSION FLOWER. So called by early Spanish settlers, who fancied it to be a representation of our Lord's passion.

The leaf is symbolic of the spear that pierced His side.

The five anthers, the marks of the wounds.

The tendrils, the cords or whips.
The column of the ovary, the upright cross.
The stamens, the hammers.
The three styles, the nails.
The filamentous processes, the crown of thorns.
The calyx, the glory or halo.
The white tinge, purity.
The blue tint, heaven.

It remains open for three days and typifies his three years' ministry.

PAWNBROKER. The sign of the three golden balls took its origin from three gilded pills, used as a coat-of-arms by the Medici family, in token of their profession of medicine. They were rich merchants of a Florentine family who lent money. The Lombards were the first to lend money in England.

PRESBYTERIAN TRUE BLUE. Butler's Hudibras. The metaphor is taken from the blue apron thrown by some of the Presbyterian preachers over their pulpits before addressing the people.

ROYAL ROAD TO LEARNING. Ptolemy Soter asked Euclid, the Alexandrian mathematician, to instruct him in the science of geometry in a more concise manner. "Sire," said Euclid, "there is no royal road to learning."

SCHOOLMASTER ABROAD. This is accredited to Lord Brougham, who once said," Let the soldier be abroad if he will; he can do nothing in this age. There is another personage abroad—the schoolmaster is abroad; and I trust to him, armed with his primer, against the soldier in full array."

SUB ROSA. Under the rose. In strict confidence. The rose was the emblem of silence among the ancients, and was suspended from the ceiling of their banquet rooms,

which was equivalent to saying that whatever was said there was to be sacredly private.

THE APPLE OF DISCORD. A disputed point. The gods and goddesses all being present at the marriage of Thetis and Peleus, Discord threw on the table a golden apple "for the most beautiful." Juno, Pallas and Venus each claimed it, and neither wishing to yield to the other, referred the matter to Paris, who decided in favor of Venus. This secured for him the hatred of Juno and Pallas, who, to avenge themselves, brought about the fall of Troy.

THE GOLDEN AGES OF ANCIENT NATIONS:

1. New Assyrian Empire, (B. C. 691-606.)
2. Chaldaeo-Babylonian Empire, (B. C. 606-538.)
3. China, the T'ang dynasty, (626-684.) The reign of Taetsong, (618-626.)
4. Egypt, (B. C. 1336-1224.)
5. Media, (B. C. 634-594.)
6. Persia, (B. C. 531-628.)

THERE'S MANY A SLIP 'TWIXT THE CUP AND THE LIP. Ancaeus, King of Samos, planted a vineyard, but was warned by a seer that he would never drink of the wine made from its grapes. Wine having been made, he was in the act of raising the cup to his lips when he was told that a wild boar was laying waste to his vineyard. He left the wine untasted, and attacked the boar, but was killed and never tasted the wine. Hence originated the proverb.

THROWING THE WEDDING SHOE. The custom of throwing an old shoe after a bride on leaving her home is an ancient one. This may refer to the ancient notion of the brides being carried off by force, or it may arise from the ancient law of exchange, implying that the parents thus renounced all dominion over their daughter.

TO HAVE A BEE IN ONE'S BONNET. Vision-

ary, fanciful. The ancients believed in the intimate connection between bees and the soul, hence Mohammed admits bees into Paradise. The moon was called a "bee" by the priestesses of Ceres, and the lunatic or moonstruck still means "with bees in his head."

WHEN GREEK MEETS GREEK THEN COMES THE TUG OF WAR. From the drama of "Alexander the Great," referring to the determined resistance of the Greek cities to Philip and Alexander.

WITH ONE FOOT IN THE GRAVE. Very near death. Julian is reported to have said that he would "learn something even if he had one foot in the grave." The Greeks said, "With one foot in the ferry-boat," meaning Charon's.

RELIGION.

The Sacred Books of History.

BIBLE.—A collective name for the divinely inspired writings constituting the professed rule of faith and practice of the Christian Church and composed of the Old Testament of 39 books, originally written in the Hebrew language mainly, and the New Testament of 27 books, written in Greek. The Old Testament, to the exclusion of the new, is also the Bible of the Jews, and contains the oldest literature in existence. The New Testament was written within the first century of our era. The number of Christians in the world is about 477,080,158, of Jews, 10,186,000.

BOOKS OF MORMON.—The sacred book of the Mormons, first published in 1830 by Joseph Smith, who claimed to have translated it from gold plates which he found under divine guidance secreted in a stone box. The number of Mormons is estimated at about 350,000 in the United States, and 60,000 in other countries.

THE SACRED BOOKS edited by Confucius, consisting of the "Book of Changes," dating originally about 1150 B. C.; the "Book of History," compiled by Confucius from old manuscript records of years between 2400 B. C. and 700 B. C.; the "Book of Rites," also compiled from ancient sources, and the ceremonial which is still the soul of the Chinese. These are the most important of the books known as the Five Classics, standing at the head of the vast literature of the Chinese, and constituting the sacred books of about 200,000,000 people.

KOJIKI. ("Book of Ancient Traditions."). The oldest monument of Shintoism, the ancient religion of Ja-

pan. It is written in pure Japanese, and was composed by order of the Mikado Gemmio, A. D. 712, and first printed about 1625. The adherents of Shintoism number about 14,000,000.

KORAN is the name of the volume containing the doctrines and precepts of Mohammed.. The aim of the Koran is to bring all to the obedience of Mohammed, as the Prophet and Ambassador of God, who was to establish the true religion on earth. There are 176,834,372 Mohammedans today.

PITAKAS ("baskets") of Buddhist scriptures. The three divisions or "baskets" are: the Vinayapitaka, or the Basket of Discipline; Suttapitaka (Pali) or Basket of Discourses; and Abhidhammapitaka (Pali) or Basket of Metaphysics.

TALMUD.—The body of Jewish civil and canonical law, consisting of the combined Mishna, or text, and Gemara, or commentary. There are twoTalmuds, named from the region in which they originated,—the Palestinian, often called incorrectly the Talmud of Jerusalem; and the Babylonian, often called Talmud Babli. The Palestinian Talmud was practically completed in the 4th century, and the Babylonian in the 5th. The authority of the Talmud among the Jews, though never approaching to anything like canonicity, has been of such a nature as to fairly entitle it to a place among the sacred books of history.

VEDA.—The most ancient sacred literature of the Hindus, comprising more than 100 books—the Rig-Veda, the oldest and most important, comprising more than one thousand hymns; the Yajur-Veda, verse and prose; the Sama-Veda, hymns; and the Atharva-Veda, in verse and prose, comprising charms, prayers, curses and spells. The Vedic period is conservatively estimated at from 1500 to 1000 B. C.

ZEND-AVESTA, the sacred books of the ancient Zor
vastrian religion and of the modified form of it which still
oastrian religion and of the modified form of it which still
ta consists of four chief divisions or groups of texts, all
more or less fragmentary, and varying in antiquity. These
are: the Yasna, including the Gathas or hymns ascribed
to Zoroaster himself; the Vispered, a supplementary ritual;
the Yashts, which are hymns to angels or lesser divinities;
and the Vendidad, which contains the account of Creation.

The Lost and Ruined Cities of the World.

AEGINA, on the island of the same name, Greece, founded by the Dorians; subjected by Pheidon, 748 B. C.; captured by the Athenians, 455 B. C.; by Publius Sulpicius, 210 B. C. Contains remains of the Temple of Jupiter Panhellenius.

ALEXANDRIA, Egypt, founded by Alexander the Great, 332 B. C.; scene of a frightful massacre commanded by Caracalla, A. D. 215; captured by Julius Caesar, 48 B. C.; 50,000 persons killed by earthquake, 365 A. D.; captured by Chosroes II, 616 A. D.; by Amru, 640 A. D.; destroyed by the Turks, 868 A. D.

ANTIOCH, Syria, founded by Seleucus Nicator, 300 B. C.; conquered by Pompey, 64 B. C.; destroyed by Chosroes I, 541 A. D.; captured by Chosroes II, 611 A. D.; by Saracens, 638 A. D.; Turks, 1084 A. D.; Crusaders, 1098 A. D.; destroyed by Bibars, Sultan of Egypt, 1267 A. D.

ATHENS, Greece, founded by Cecrops, 1558 B. C.; captured by Xerxes, 480 B. C.; burnt by Mardonius, 479 B. C.; rebuilt by Themistocles, 478 B. C.; at the height of its prosperity in 439 B. C.; taken by Lysander in 404 B. C.; walls rebuilt by Conon, 393 B. C. Submitted to Alexander the Great, 335 B. C.; conquered by Cassander, surrendered to Antigonus Gonatas, 200 B. C.; partly destroyed by Philip of Macedon, 300 B. C.; subdued by the Romans, 146 B. C.; walls and fortifications destroyed by Sylla, 86 B. C.

BAALBEC, or Heliopolis, Asia Minor; sacked by the Moslens, 748 A. D.; by Timour Beg, 1400 A. D.

BABYLON, in Asia, founded by Nimrod, 2247 B. C.; captured by Tiglath-Pileser I, 1110 B. C.; by Cyrus, 538 B. C.; walls destroyed by Darius, 537 B. C.; taken by Alexander III, 331 B. C.; by Seleucus Nicator, 312 B. C., who destroyed Babylon to build Seleucia.

BYZANTIUM, in ancient Thracia (modern Turkey), founded by Megarius, 667 B. C.; captured successively by the Medes, Athenians and Spartans; by the Romans, 73 A. D.; destroyed by Severus, 196 A. D. It was refounded 324 A. D. and called Constantinople.

CARTHAGE, city in Africa; founded by Dido, 878 B. C.; captured by Scipio after the battle of Zana, 201 B. C.; burned by the Romans, 146 B. C.; rebuilt as a Roman colony, 123 B. C.; captured by Genseric, 439 A. D.; by Belisarius, 533 A. D.; sacked by the Arabs, 647 A. D.; destroyed by Hassan, 698 A. D.

CORINTH, in Greece; founded by Phoenicians, 1520 B. C.; captured by the Dorians, 1074 B. C.; by the Macedonians, 338 B. C.; by Aratus, 243 B. C.; Antigonus Doson, 223 B. C.; destroyed by L. Mummius, 146 B. C.; rebuilt by Julius Caesar, 46 B. C.; sacked by Alaric, 396 A. D.

DELPHI, in Greece; founded by Amphictyons, 1263 B. C.; temple burned, 548 B. C., and rebuilt by the Alcmaeonidae; plundered by the Phocians, 357 B. C.; by Sulla, 82 B. C.; by Nero. 67 A. D.; temple suppressed by Theodosius I.

EPHESUS, in Asia Minor; burned by the Amazons, 1141 B. C.; rebuilt by the Ionians, 1045 B. C.; captured by Croesus, 559 B. C.; by Cyrus, 554 A. B.; destroyed by an inundation, 322 B. C.,; rebuilt, 300 B. C.; destroyed by an earthquake, 17 A. D.

HERCULANEUM, in Italy; founded by Hercules; partly ruined by an earthquake, 63 A. D.; completely buried by an eruption of Vesuvius, 79 A. D.; a second settlement

buried by Vesuvius, 472 A. D.; fragments of statues were discovered, 1709 A. D.; theatre discovered, 1738 A. D.

JERUSALEM, in Palestine; founded about 1913 B. C.; captured by David, 1049 B. C.; sacked by the Philistines and Arabs, 887 B. C.; by Nebuchadnezzar, 586 B. C.; by Antiochus Epiphanes, 170 B. C.; captured by Pompey, 63 B. C.; by Herod, 37 B. C.; destroyed under Titus, 70 A. D.

MEMPHIS, in Egypt, founded by Menes, 3890 B. C.; partly destroyed by the Persians, 525 B. C.; captured by Antiochus Epiphanes, 171 B. C.; restored by Septimus Severus, 202 A. D., decayed under the Arabs in the 7th century, and Cairo built from its ruins.

NINEVEH, in Assyria; founded by Ashur, 2245 B. C.; received its name from Ninus, 2182 B. C.; destroyed by Cyaxares and Nabopolassar from 625 to 606 B. C. Layard began exploring the ruins, 1840 A. D.

PALMYRA, Syria; founded by Solomon, 1001 B. C.; submitted to Hadrian, 130 A. D.; destroyed by Aurelian, 274 A. D.; restored by Justinian I, 527 A. D.; again destroyed by the Saracens, 744 A. D.; ruins discovered, 1691 A. D.; explored by Wood and Dawkins, 1751 A. D.

PERSEPOLIS, in Persia; supposed to have been founded by Jemshed; burned by Alexander III, 331 B. C.

POMPEII, in Italy; date of its foundation unknown; said to have been conquered by the Samnites, 440 B. C.; captured by the Romans, 360 B. C.; almost destroyed by an earthquake, 63 A. D.; completely buried by an eruption of Vesuvius, 79 A. D.; accidentally discovered, 1748 A. D.; excavations commenced, 1755 A. D.

SAMARIA, in Palestine; founded by Omri about 925 B. C.; captured by Shalmaneser IV, 721 B. C.; by Alexander III, 336-332 B. C.; destroyed by John Hycanus, 109 B. C.

SARDIS, in Asia Minor; captured by the Cimmerians about 635 B. C.; by the Persians, 554 B. C.; burned by the Greeks, 499 B. C.; it was rebuilt; captured by Alexander III, 334 B. C.; by Seleucus I, 293 B. C.; by Antiochus, 214 B. C.; by the Romans, 190 B. C.; destroyed by an earthquake, 14-37 A. D., under Tiberius, who rebuilt it; captured by the Turks in the 11th century; destroyed by Tamerlane, 1402 A. D.

SODOM AND GOMORRAH, cities of Palestine; destroyed according to the biblical account, by fire from heaven, 1897 B. C.

THEBES, or Luxor, in Egypt; founded by Menes, 2717 B. C.; 1600-800 B. C.; captured by the Persians, 525 B. C.; destroyed by the Ptolemy Lathyrus, 86 B. C.

TROY, or ILIUM, in Asia Minor; destroyed by the Greeks, about 184 B. C.; Dr. Schliemann discovered ruins, 1872 A. D., which he considers ancient Troy.

TYRE, in Asia Minor; founded about 2750 B. C.; destroyed by Nebuchadnezzar, 572 B. C.; rebuilt; captured by Alexander III, 332 B. C.; by Antiochus III, 218 B. C.; by the Crusaders, 1128 A. D.; by Chalid, 1291 A. D.; destroyed by the Turks, 1516 A. D.

LAW.

Remarkable Trials.

1637—Trial of Anne Hutchinson, for sedition and heresy, before General Court of Massachusetts; imprisoned and banished.

1649—King Charles I, for despotism; executed Jan. 30.

1656—The Quakers of Massachusetts; resulting in imprisonment, flogging, banishment, or death.

1678-81—In the case of the Popish plot; resulting in the conviction of Coleman, Ireland and other priests, Thomas Whitebread, and other Jesuits, and in the execution of Viscount Stafford, etc.

1691—Jacob Leisler, Dutch burgher of New York, for high treason against the British Government; hanged, May 16.

1692—Salem Witchcraft trials; Special Court of Oyer and Terminer; many executed; begun June.

1745—The negro slaves Quack, Cuffee, and many others, for a conspiracy to burn the city of New York and murder its inhabitants; burned at the stake.

1746—Lords Kilmarnock and Bamberino, for high treason; executed August 18.

1747—Lord Lovat, 80 years of age, for high treason; beheaded, April 9.

1759—Eugene Aram, for murder at York, Eng.; executed, August 13. The great cause between the families of Hamilton and Douglas, February 27.

1760—Earl Ferrers, for the murder of his steward; executed, April 16.

1776—Duchess of Kingston, for marrying two husbands; guilty, April 15.

1778—Celebrated court-martial of Colonel David Henely, of the American Army, accused by General Burgoyne of improper conduct toward British prisoner of war; acquitted.

1780—Major John Andre, of the British Army, for being a spy. Board of general officers, New York; executed, October 2. Trial of Joshua Hett Smith, by court martial, for aiding and assisting Benedict Arnold; acquitted.

1788—Lord George Gordon, for a libel on the Queen of France; guilty, January 28.

1790—The printer of The Times, for libels on the Prince of Wales and Dukes of York and Clarence; fined $1,000, and imprisonment one year; February 3.

1792-93—Louis XVI, of France; tried, January 19; condemned to death, January 20; beheaded.

1802—Mutineers at Bantry Bay; hanged, January 8. Governor Wall, for cruelty and murder twenty years before; January 20.

1803—M. Peltier, for libel on Napoleon Bonaparte, in L'Ambique; found guilty, February 21. Robert Emmet, at Dublin, for high treason; executed next day, September 19.

1808—Peter Finnerty and others, for libel on the Duke of York, November 9.

1809—The Duke of York, by inquiry in the House of Commons, on charges preferred against him by Colonel Wardle. William Cobbett, for libel on the German legion; convicted, July 9.

1814—Lord Cochrane, Cochrane Johnstone, Berenger, Butt, and others, for frauds in the public funds, February 22.

1816—Captain Hutchinson, Sir Robert Wilson, and Mr. Bruce, in Paris, for aiding the escape of Count Lavalette; April 24.

1817—Cashman, the intrepid seaman, for the Spafields riots and outrages on Snowhill; convicted and hanged January 20.

1820—Sir Charles Wolseley and Rev. Mr. Harrison for sedition; guilty, April 10. Thistlewood, Ingo, Brunt, Davidson, and Tidd, for conspiracy to murder the king's ministers; commenced April 17. Louvel, in France, for the murder of the Duke of Berri, June 7. Caroline, Queen of England, before House of Lords, for adultery; commenced August 16; not proven.

1828—Joseph Hunton, Quaker merchant, for forgery; hanged October 28.

1829—Reinbauer, the Bavarian priest, for murder of women; August 4.

1831—Rev. Robert Taylor, known as the "Devil's Chaplain," for reviling Christ, July 6.

1833—Rev. Mr. Irving, by the Scots Church, for heresy, March 13.

1836—Frischi, at Paris, for attempting life of the king, Louis Philippe, by exploding an infernal machine, January 30.

1840—Edward Oxford attempted the life of Queen Victoria; adjudged insane and confined in Bethlehem Hospital, July 9 and 10. Prince Louis Napoleon for his descent upon France.

1843—MacNaughten for the murder of Mr. Hammond, secretary to Sir Robert Peel; acquitted on the ground of insanity, March 4.

1849—Gorham vs. the Bishop of Exeter; ecclesiastical case; judgment against the plaintiff, August 2.

1854—Case of Pierce Somerset Butler vs. Viscount Mountgarret; verdict for plaintiff, who thus came into the peerage, defendant being proved illegitimate, August 4.

1860—Rev. J. Bomwell, of Stepney, degraded for immorality, August 20.

1861—Emperor of Austria vs. Day; verdict for plaintiff. Defendant had printed 100,000 florin notes on the Bank of Hungary for Louis Kossuth. The notes were ordered to be destroyed within one month, May 6; judgment affirmed, June 12.

1863—On appeal of Earl of Cardigan vs. Colonel Calthorpe for libel for deserting his men at Balaklava, October 25; verdict for defendant, June 9-10.

1865—Trials of Fenians for treason and felony; Thomas Luby convicted and sentenced to 20 years' penal servitude; O'Donovan Rossa sentenced to imprisonment for life, December 13; other convictions at Cork, December.

1866—Bishop Colenso vs. Gladstone and others, for withholding his stipend; verdict for plaintiff, with costs, November 6.

1867—Fenian trials at Manchester, Allen, etc., October 30 to November 12. Smith vs. Tibbitt and others, will case, disposing of over $2,000,000; verdict for defendant, annulling the will of Ann Thwaites, who is declared of unsound mind, after a long trial in April and May; decided August 6.

1868—Lyon vs. Horne (spiritual medium). Plaintiff, a widow, sought to recover $350,000 stock, given to Horne at the alleged command of her deceased husband's spirit, between October, 1866, and February, 1867; suit instituted June 15, 1867; trial, April 21 to May 1, 1868; verdict given for

the plaintiff, by the Vice-Chancellor, Sir G. M. Giffard, May 22. Andrew Johnson, 17th President of United States, impeached by Congress; tried before United States Senate, March 23; acquitted May 26. Trial of Fenians for Clerkenwell outrage, begun April 20; all acquitted except Michael Barrett, April 20-27.

1873—Bank Forgery. Austin and George Bidwell, MacDonnell, and Edwin Noyes, Americans, forged bills for discounting at Bank of England, West Branch, and obtained $501,085; detected through not dating one bill; convicted; penal servitude for life, their plot for escaping by bribing the warden failing, August 18-26. Rev. John Berrington (after 30 years' swindling), sentenced to 15 years' penal servitude, August 22. Rev. O'Keefe vs. Cardinal Cullen (for libel and virtually suspending him from office); judges divided (at Dublin), in opinions; three decide that Papal ordinance on which the Cardinal replied was prohibited by the statues of Elizabeth; trial begun May 12, verdict for plaintiff; jury gave one farthing damages, May 27.

1874—Tichborne vs. Lushington, the plaintiff declared himself to be Sir Roger Charles Tichborne, supposed to have been lost at sea, and claimed the baronetcy and estates, worth about $120,000 a year. Trial lasted 103 days, ending March 6, 1872, at an estimated cost to the estate of nearly $460,000. The trial of the claimant for perjury and forgery begun April 23, 1872. Case closed for the defense on the 124th day. Verdict, guilty of perjury; sentence, 14 years' imprisonment with hard

labor. Longest trial known in England; closed April 29.

1875—The Rev. Henry Ward Beecher for adultery. Not proven.

1878—Will case, Dublin, Christopher Bagot acquired a fortune in Australia; made will disinheriting his own son as illegitimate; died May 23; trial 23 days; painful disclosures; will set aside, May 20. William M. Tweed for forgery and embezzlement of public moneys; he died in prison.

1880—The Rev. E. Hayden, for murder of Mary Stannard; jury disagreed; still under bonds to appear.

1895—Alfred Dreyfus, French artillery officer, convicted of treason on forged papers, and imprisoned on Devil's Island. Conviction finally set aside and Dreyfus declared innocent and restored to rank.

LITERATURE.

Familiar Allusions Frequently Used.

A

ACADEMY (Academia). A gymnasium in the suburbs of Athens, where Plato founded his school, 368 B. C. The Academy (as a philosophic school) was divided into the old (by Plato and his disciples); the middle (by Arcesilaos), and the new (by Carneades).

ACADEMY, THE FRENCH. (Academie Francaise.) One of the five academies constituting the French institute; founded by Richelieu; deals with the French language and has 40 members.

AGES. The five ages of the world, according to Hesiod, are the Golden, the Silver, the Brazen, the Heroic, and the Iron.

ALEXANDRIAN LIBRARY. Founded by Ptolemy Sotor, at Alexandria, Egypt. Contained 10,000 volumes. Burned 47 B. C.

ATHENS, THE MODERN. This term has been applied to Edinburgh and Boston.

AUGUSTAN AGE. The palmiest period of a literature; the best days of Roman literature being under Augustus.

B

BACONIAN PHILOSOPHY. The inductive philosophy of Lord Bacon.

BATTLE OF THE BOOKS. A satire by Swift on the comparative merits of ancient and modern literature.

BIBLIOTHEQUE NATIONALE (National Library.)

At Paris, contains over 1,000,000 books, 150,000 manuscripts, etc.

BOURGEOISIE. French tradesmen and manufacturers as a class.

C

CACHET LETTRES DE. (Sealed letters.) Blank warrants with the French King's seal, to free from or imprison in the Bastile.

CONGRESSIONAL LIBRARY. At Washington, largest in the United States.

D

DAMOCLES SWORD. Presentment of evil. Dionysius the Elder, tyrant of Syracuse, invited his flatterer Damocles, to a splendid feast, but hung over his head a sword dangling by a single hair.

DARWINIAN THEORY. A theory proposed by Charles Darwin in his Origin of Species; the different species came from one or a few original forms, present differences being the result of development and natural selection.

DE PROFUNDIS. (Out of the depths.) The first two words of the Latin version of the 130th Psalm. Sung at burials.

E

ECCE HOMO. (Behold the man.) A famous painting by Corregio representing the Saviour crowned with thorns.

ECOLE POLYTECHNIQUE. (Polytechnique School.) A Parisian school whose graduates are given places in the public service.

F

FABIAN POLICY. A policy of delay, such as was pur-

sued by Q. Fabius Maximus, called Cunctator, "The Delayer."

FLAGELLANTS. Religious fanatics of the thirteenth century, who went about naked and scourging themselves.

FOURIERISM. A system of communism proposed by Charles Fourier. The world was to be divided into "phalansteries" of 400 families, who were to live and work in common.

G

GENRE PAINTING. One representing domestic rural scenes.

GOBELINS. A famous tapestry and carpet manufactory founded at Paris by J. Gobelins in 1515.

GYGES RING. A ring which made the wearer invisible. Gyges, a Lydian, found in a brazen horse in a cavern, a man's corpse, from the finger of which he took a brazen ring which made him invisibile. With this ring he went into the chamber of the King of Lydia, whom he murdered and succeeded.

H

HABEAS CORPUS ACT. Passed in time of Charles II. It provides that the body of an accused person must be brought, if he insist, before a judge, and the reason of his confinement stated. The judge will then determine whether or not to admit the accused to bail.

HEGIRA. Date of Mahomet's flight from Mecca, July 16, 622. Mohammedan epoch begins with it.

HISTORY, FATHER OF. Herodotus, the Greek historian.

HOLY FAMILY, THE. The name of many medieval pictures representing the infant Jesus, Joseph, the Virgin, John the Baptist, Anna, and Elizabeth.

HOLY LEAGUE. The alliance of Pope Julius II, France, Germany, Spain and some of the Italian republics in 1508 against Venice.

I

IMMACULATE CONCEPTION. Dogma of Catholic Church that the Virgin Mary was conceived without original sin.

INDEX EXPURGATORIUS. A list of printed works prohibited by the Church of Rome. Published annually.

J

JUBILEE, YEAR OF. Among the Jews this comes every 50th year. In Catholic church it comes once in every 25 years.

K

KILKENNY CATS fought in a saw-pit till only their tails remained.

L

LAKE SCHOOL, THE. The poetry of Coleridge, Wadsworth and Southey.

LUSIAD. A Portuguese epic by Camoens recounting the adventures of the Lusians (Portuguese) under Vasco de Gama, the first to sail to India.

M

MAECENAS, friend and patron of literary men. Caius Cilnius Maecenas, Roman general and statesman, friend of Augustus, was a liberal patron of Horace and Virgil.

MAHOMET'S COFFIN was said to be hung in midair at Medina.

MALTHUSIAN DOCTRINE. The English economist,

Malthus, claimed that population increases faster than the means of living, so that unless population is checked, a part of it must starve to death or all be insufficiently fed.

MEZZO RELIEVO. (Middle Relief). Figures cut in stone, etc., which project from the tablet more than figures in Basso-Relievo, and less than figures in Alto-Relievo.

MORGANATIC MARRIAGE. The marriage of a man of high rank to a woman of inferior rank, who does not take take her husband's title.

MUSIC OF THE SPHERES. According to Plato each planet has a siren who sings a song harmonizing with the motion of her own planet, and also with the other planets.

O

ODYSSEY. Homer's narrative poem dealing with the adventures of Odysseus (Ulysses) on his voyage from Troy to Ithaca.

P

PHOENIX. A fabulous bird, said to live 500 years, when it burns itself on a nest of spices, and renews its life 500 years.

R

ROMANTIC SCHOOL. A term applied to a number of German poets and painters in the beginning of the 19th century. In France the term was applied to those poets and painters, of whom Victor Hugo was the last survivor, who aimed at the natural, as distinct from the conventional.

ROUND ROBIN. Petition with signature in a circular form.

S

SCHOOLMEN. The medieval theologians whose lectures were delivered in the Cathedral schools.

SEVEN WONDERS OF THE WORLD. The Pyramids of Egypt; the Temple of Diana at Ephesus; the Hanging Gardens of Babylon, the Colossus at Rhodes; the Mausoleum at Halicarnassus; the statue of Zeus, by Phidias, at Olympia; and the Pharos (lighthouse) of Alexandria in Egypt.

SORBONNE, The. A Parisian University founded in the 13th century by Robert de Sorbonne.

STABAT MATER. Famous Latin hymn on the crucifixion.

T

TROUBADOURS. Provencal poets from the 11th to the 14th century.

U

UFFIZI. A building in Florence containing a celebrated art collection.

V

VENUS DE MEDICI. Celebrated Greek statue at Florence, attributed to Cleomenes, a sculptor of the 2nd century B. C.

W

WANDERING JEW, The. A famous personage in mediæval legend. Our Saviour, wearied with carrying his cross, is said to have stopped before the house of one Ahasuerus, a cobbler, who pushed him off, saying, "Away with you." Jesus answered, "I go away, but thou shalt tarry till I come." Ahasuerus wandered over the world, seeking death, but condemned to live, till the coming of our Lord. The Wandering Jew was

seen from time to time in Europe. His last recorded appearance was late in the 18th century, in Belgium. According to another legend, the Wandering Jew's name was Kartophilus, the doorkeeper of the Hall of Judgment. He struck our Saviour, telling him to go faster.

WEDDING. The first anniversary of a wedding is called a Paper Wedding, the gifts being paper articles, the fifth Wooden; the tenth, tin; the fifteenth, crystal; twenty-fifth, silver; fiftieth, golden; seventy-fifth, diamond.

Z

ZOLLVEREIN. A commercial association between the German States to maintain the same tariff rates.

ART.

Famous Galleries of the World.

ITALY.

THE PINACOTECA, BOLOGNA.—This is one of the finest picture-galleries in Italy. It comprises eight saloons. The principal gems in this collection are: Raphael's "St. Cecilia in Ecstasies;" "The Death of St. Peter," by Domenichino; "Samson destroying the Philistines," by Guido; the "Madonna della Pieta," by Guido; the "Baptism of Christ," by Albano; the "Martyrdom of St. Agnes," by Domenichino; the "Massacre of the Innocents," by Guido; the "Madonna, with St. Augustine and other saints," by Francia; the "Apparition of the Savior to Mary Magdalen under the Figure of a Gardener," by Calvert.

ACCADEMIA DELLE BELLE ARTI, FLORENCE.—This gallery contains a fine progressive series of paintings, from Cimabue to the highest perfection in the art. The entrance hall contains busts of great painters and bas-reliefs in terra-cotta by Luca della Robbia. The hall of the great pictures contains some 120 specimens. There is a hall of ancient pictures, artists unknown, and a hall of small pictures from the 14th to the 17th century. The hall of cartoons contains some fine designs by Raphael and other great masters, and on an upper floor, six rooms contain modern Italian pictures.

PITTI PALACE, FLORENCE.—This collection of pictures consists of the principal part of the collections of the Cardinals Leopoldo and Carlo de Medci. Ferdinand II made many important additions to it, by purchasing the best

paintings then existing in the Tuscan churches. The number of pictures exceeds 500, and the gallery consists of a series of splendid apartments, the ceilings of the first five of which were painted in fresco by Pietro da Cortona in 1640

THE ROYAL GALLERY OF THE UFFIZI FLORENCE.—The collection of paintings in this gallery is, without doubt, the richest and most varied in the world with the exception of the Royal Gallery at Madrid, although it is not so extensive as the galleries of the Louvre, Dresden, or the Belvidere at Vienna. It contains a fine collection of the Tuscan school, and includes several of Raphael's and Titian's masterpieces. The greatest treasures of the gallery are contained in one room called the Tribune, where are also placed the most celebrated statues of antiquity. A suite of small rooms contains some admirable specimens of other schools of painting. In one of the larger rooms is the famous group of the Niobe; two others are filled with portraits of artists, chiefly by their own hands, and there are besides valuable collections of busts, coins, medals, gems, engravings, and drawings by the old masters.

AMBROSIANA, MILAN.—This institution was founded by Cardinal Frederigo Borromeo, archbishop of Milan; the gallery and museum possess a great many paintings, statues, drawings, etc. The principal room is adorned with a frieze of portraits of distinguished individuals; it also contains busts of Lord Byron, Thorwaldsen, etc.

NATIONAL MUSEUM, NAPLES.—The collection in the National Museum, comprising 1,600 frescoes found at Herculaneum and Pompeii, are the chief glory of Naples. The gallery of paintings contains 500 works, mostly gems of the great masters; while the Neapolitan school can nowhere be studied so well as here.

CAMPO SANTO, PISA. "This museum of Tombs"

contains many very interesting specimens of sepulchral monuments, statues, and very old paintings. The walls are covered with frescoes representing Scriptural subjects by many of the old master. The earth which surrounds this edifice was brought from Jerusalem in fifty galleys as long ago as 1228.

VILLA ALBANI, ROME. The Villa Albani was built in the middle of the last century by Cardinal Alessandro Albani. It is rich in works of art, and the most important specimens are to be found in the Casino and Coffee house. Among the remarkable statues are those of Julius Caesar, Agrippina, Augustus and Faustina; busts of Alexander the Great, Scipio Africanus, Hannibal, Homer, and Epicurus; bas-reliefs of Antonius crowned with the lotus-flower, and Diogenes in a large jar receiving Alexander; and the bronze Apollo Sanrocthonos, supposed to be the original by Praxiteles.

BORGHESE PALACE, ROME. The gallery of this palace contains over 800 paintings. They are arranged in twelve different rooms. Among these are Raphael's "Entombment of Christ," "Caesar Borgia," and "Julius II," "The Saviour," by Leonardo da Vinci; "Sacred and Profane Love," "The Three Graces," "Samson," "Holy Family, with St. John," by Titian; "St. Anthony Preaching to the Fishes," by Paul Veronese; "Chase of Diana," by Domenichino; "Venus and Cupid." by Andrea del Sarto; and magnificent works of many other artists are here displayed.

DORIA PALACE, ROME. This gallery contains about 800 pictures. Among the finest specimens are the following: Raphael—Portraits of Baldo and Bartolo; Titian —"Sacrifices of Isaac;" portrait of Titian's wife; Leonardo da Vinci—a lovely portrait of Joanna II of Aragon, queen of Naples; Claude—"Mercury Stealing the Cattle of Apol-

lo," the celebrated Molivo, "Flight into Egypt;" Guercino—"The Prodigal Son," "Endymion," "St. Agnes;" Annibal Caracci—"The Assumption," "Flight into Egypt," "The Nativity," "Adoration of the Magi," and the "Entombment of our Saviour."

VATICAN GALLERY, ROME. The Vatican gallery does not contain fifty pictures, but it has more real treasures of art than any other collection in the world. The "Transfiguration," "The Madonna di Foligno," and "The Communion of St. Jerome," are a gallery in themselves. The pictures are arranged in four rooms, built by Pius VI, and disposed as we now see them by Gregory XVI, under the direction of Camiccini.

DUCAL PALACE, VENICE. This palace contains, among other paintings, the impressive and magnificent painting of "Paradise." It is immensely large—84 feet in width and 33½ feet in height—and painted by Tintoretto; also "The Embassadors Meeting Frederick at Pavia, Praying to him for Restoration of Peace to Italy and the Church;" "The Second Conquest of Constantinople by the Crusaders and Venetians in 1204;" "The Great Naval Battle which took place in Austria at the time the Imperial fleet was defeated, and Otho, the Emperor's son, taken prisoner;" "Pope Alexander III Discovered Secreted in the Convent of La Carita, when Escaping from Frederick II in 1177;" "The Doge Departing from Venice, and is Receiving the Blessing of the Pope;" "The Emperor Submitting to the Pope;" "Alexis Comnenus, Son of the Dethroned Emperor of Constantinople, imploring the Venetians to aid him in his Father's behalf;" "The Return of the Doge Contarini, after the Victory gained over the Genoese at Chioggia in 1378 by the Venetians;" and Paul Veronese's

painting of "Venice amid the Clouds Crowned with Glory," near the great picture of "Paradise."

GERMANY.

ROYAL PICTURE GALLERY, BERLIN. This collection has about 1,500 paintings. These are divided into three classes—the Italian, French and Spanish, the Dutch, Flemish and German, and the Byzantine, Italian, Dutch and German pictures down to the end of the fifteenth century—each of the classes being chronologically arranged. In 1874 the gallery was enriched by the valuable pictures of the Suermondt gallery,

ROYAL GALLERY OF PICTURES, DRESDEN. The Art Gallery of Dresden was founded by Augustus I, and increased by his successors at great cost. It contains about 2,500 pictures, being especially rich in specimens of the Italian, Dutch and Flemish schools. Among the Italian masters represented are Raphael, Titian, Coreggio, Leonardo da Vinci, Paolo Veronese, Andrea del Sarto, Giulio Romano, Annibale Caracci, Guido Reni and Carlo Dolci. Of the Flemish and Dutch schools there are paintings by Rubens, Vandyck, Rembrandt, and Ruysdael, Wouvermann, Dow, Teniers, Ostade, Potter, etc. The French school is represented among others by Poussin and Claude. The gem of the collection is Raphael's Madonna di San Sisto, for which a room is set apart. There is a special room for the Madonna of the younger Holbein. Other paintings with which the name of the gallery is generally associated are Coreggio's "La Notte" and "Mary Magdalene," Titian's "Tribute Money" and "Venice," "The Adoration" and the "Marriage in Cana," by Paolo Veronese; Andrea del Sarto's "Abraham's Sacrifice;" Rembrandt's Portrait of Himself with his Wife Sitting on his knee; "Judgment of Paris" and the

"Boar Hunt" by Rubens; Vandyck's "Charles I, his Queen and their children." In separate compartments there are a number of crayon portraits, most of them by Rosalba Carura, and views of Dresden by Canaletto and other artists. Besides the picture gallery, the museum includes a magnificent collection of engravings and drawings. There are upward of 350,000 specimens arranged in twelve classes, so as to mark the great epochs in the history of art. A collection of casts, likewise in the museum, is designed to display the progress of plastic art from the time of the Egyptians and Assyrians to modern ages. This collection was begun by Raphael Mengs, who secured casts of the most valuable antiques in Italy, some of which no longer exist.

THE PINACOTHEK, MUNICH. This gallery was begun in 1826 and opened in 1836. It is built after the design of Klenze, and is considered by many the most convenient and appropriate receptacle for paintings in Europe. The facade above the corridor is surmounted by a row of statues of twenty-five of the greatest painters, modeled by Schwanthaler.

The number of paintings is 1,300, consisting of all the collections belonging to the King of Bavaria, including the galleries of Dusseldorf, Mannheim, Zweibrucken, and many other cabinets. They are arranged according to schools, in nine splendid halls, and twenty-three adjoining small cabinets.

FRANCE.

THE LOUVRE, PARIS. The Louvre was originally a royal residence. Napoleon I turned it into a museum, and deposited in it the finest collection of paintings, statues and treasures of art known in the world. Many of those brought from Italy have since been restored to the rightful possessors. The magnificent buildings of the new Louvre, begun by

Napoleon I and completed by Napoleon III, were inaugurated 1857.

AUSTRIA.

IMPERIAL PICTURE GALLERY, VIENNA. This gallery ranks second only to that of Dresden in all Germany, and was built in 1724. It is very rich in the Italian and old German schools. The pictures, about eighteen hundred in number, are arranged according to schools, such as the Venetian, Roman, Florentine. Flemish, etc.

BELGIUM,

MUSEUM, ANTWERP. The old convent of the "Recollects" has been converted into a museum, in which is a magnificent collection of paintings, comprising the choicest specimens of the masters of the Flemish school, Vandyck, Jordaens, Rubens, Teniers and others.

It contains also the masterpiece of Vandyck, "The Crucifixion." There are two pictures by Rubens here which are considered by many as fully equal to his "Descent from the Cross" and "Elevation to the Cross" in the Cathedral; they are the "Crucifixion of Christ between the Two Thieves," and his "Dead Christ," who lies on a stone table, covered with straw.

SPAIN.

ROYAL MUSEUM, MADRID. This gallery is said to contain more wealth in pictures than any other collection in Europe. From a chronological point of view, the Museum of Madrid is inferior to the collection at the Louvre in Paris, or the Uffizi and Pitti Palace at Florence. But, considering it as a collection of masterpieces, it is superior to that of both places. It contains, besides specimens of many other famous painters, 10 of Claude, 22 of Vandyck, 16 of Guido, 46 of Murillo, 21 of N. Poussin, 10 of Raphael, 62

of Rubens, 52 of Teniers, 43 of Titian, 27 of Tintoretto, 62 of Velasquez, 24 of Paul Veronese, and 10 of Wouvermans. Of all these pictures the most wonderful are those of Velasquez.

HOLLAND.

MUSEUM OF THE TRIPENHIUS, AMSTERDAM. This museum contains over 400 works, chiefly of the Flemish and Dutch schools, including the "Night Guard" of Rembrandt, and the "Banquet of the Civic Guard" by Van der Helst; besides nearly 4,000 engravings, and a magnificent numismatic collection. Among the other collections of Amsterdam are those in the Van der Hoop Museum, Townhall, besides several private collections.

ROYAL MUSEUM, HAGUE. The chief attraction at the Hague is an unrivaled collection of paintings by the Dutch masters, in the National Museum, which occupies the former palace of Prince Maurice, an elegant building of the 17th century. The most valuable of this collection is the "Young Bull," by Paul Potter, a picture which occupies nearly the whole end of one of the rooms. This highly-prized work of art was carried off to Paris by order of Napoleon, and hung up in the Louvre, where it was considered the fourth in value in that collection, which is the largest in the world, though not the most valuable. This gallery contains also Poussin's "Venus Asleep."

MUSEUM, ROTTERDAM. This gallery contains about 300 paintings, counting among the artists Rembrandt, Cuyp, Rubens, Albert Durer, Ary Sheffer and the two Wouvermans. Behind the museum is a fine bronze monument of Gusbert Kurel Van Hogendorf, erected in 1813 by Joseph Geefs.

ENGLAND.

COLLECTION IN THE PALACE, HAMPTON

COURT. The celebrated cartoons of Raphael, which were formerly in the gallery of this palace, have been removed to the South Kensington Museum, but it still contains a valuable collection of pictures, including a number of fine specimens of the old masters, and a large collection of portraits of persons famous in English history.

NATIONAL GALLERY, LONDON. This collection began with the purchase by the British Government of the Angerstein collection of 38 pictures, for $275,000, in 1824. Sir G. Beaumont, Mr. Holwell Car, and many other gentlemen, as well as the British Institution, contributed many fine pictures, and the collection has since been greatly augmented by gifts and purchases. In 1865 the House of Commons voted $100,000 to buy land to enlarge the building. Of its pictures, 284 were presented, 256 bequeathed and 313 were purchased at a cost of $1,272,635. In 1871 the Peel collection (70 pictures) was bought for $375,000.

RUSSIA.

ACADEMY OF ARTS, ST. PETERSBURG. The lower floor of this building is devoted to sculpture; above are galleries appropriated to paintings, and on the second story a large collection of drawings illustrating the progress of architectural art, together with a well lighted hall, destined for an annual exhibition of paintings held in September.

AMERICA.

ATHENAEUM, BOSTON. The Boston Athenaeum has a fine gallery of paintings and another of sculpture. The American Academy of Arts and Sciences, founded 1780, has its library in this building.

HISTORICAL SOCIETY, BROOKLYN. The Long Island Historical Society possesses a valuable collection of paintings.

HISTORICAL SOCIETY, NEW YORK. The New York Historical Society contains the famous Abbott Egyptian collection, the Lenox Nineveh marbles and one of the most extensive and finest galleries of paintings in the country.

METROPOLITAN MUSEUM OF ART, NEW YORK. This institution, founded 1870, contains the Blodgett collection of Flemish, Dutch and other paintings, the unique Cesnola collection of Cypriote archaeological objects, the Avery collection of pottery and numerous other articles of interest.

NATIONAL ACADEMY OF DESIGN, NEW YORK. This institution, founded 1826, has a good collection of paintings, and in spring and summer gives exhibitions of recent works of American artists. It also maintains free schools for advanced students in art.

ACADEMY OF FINE ARTS, PHILADELPHIA. This academy, founded 1805, is devoted to the promotion of drawing, painting and sculpture, maintains a free art-school and possesses a fine collection of statues and paintings.

UNION LEAGUE, PHILADELPHIA. This club has a handsome building in the Renaissance style, and a fine collection of paintings ad statuary.

ATHENAEUM, PROVIDENCE. The Athenaeum is a substantial granite building, and contains a collection of valuable paintings, among which are portraits by Allston and Sir Joshua Reynolds, and Malbone's masterpiece, "The Hours."

CORCORAN ART GALLERY, WASHINGTON. The Corcoran Art Gallery is a large brick and brown-stone building in the Renaissance style, near the White House. It was founded by W. W. Corcoran, the banker, who deeded it to the people, and presented it with his superb private art

collection and an endowment fund of $900,000. It contains nearly 200 paintings, most of them masterpieces; the finest collection of casts in the country, and among the marble statuary "The Greek Slave," by Powers, and "The Dying Napoleon," by Vela; the richest bronzes in America; and specimens of bric-a-brac, porcelain and majolica ware.

PHILOSOPHY.

Ancient and Modern Schools of Philosophy.

PYTHAGOREAN, 535 B. C.—This school was founded by Pythagoras, who is said to have been the first to assume the title of philosopher, or lover of wisdom. The distinguishing features of his system, the doctrine of metempsychosis, or the transmigration of souls, prevailed among the Egyptians and the Hindus.

SOCRATIC, 425 B. C.—Socrates' fundamental doctrine was that virtue is intellectual, a necessary consequence of knowledge, while vice is ignorance and akin to madness. Knowledge, virtue, and happiness he held to be inseparable. His religious doctrines culminated in the conception of the Deity as the author of the harmony of nature and the laws of morals, revealed only in his works, and of the soul as a divine and immortal being, resembling the Deity in respect of reason and invisible energy.

PLATONIC (the Academy), 374 B. C.—Plato was the founder of this school. The distinctive character of his philosophy is expressed by the word idealism, as opposed to realism, materialism, or sensationalism; the capacity of forming and using ideas being taken as an essential virtue or quality of mind as contrasted with matter. He advocated the so-called Platonic love, a pure, spiritual affection subsisting between the sexes, unmixed with carnal desires, and regarding the mind only and its excellencies.

CYNIC, 330 B. C.—The name of this school of philosophers is believed to be derived from the Cynosarges, a gymnasium in the suburbs of Athens, in which their

founder, Antisthenes, used to lecture. Diogenes, 412-323 B. C., was one of the most celebrated of this school. This sect professed to condemn all worldly things, even sciences, except morality, and lived in public with little shame.

EPICUREAN, 306 B. C.—Epicurus, of Gargettus, near Athens, about 306 B. C., taught that the greatest good consists in peace of mind springing from virtue, as tending to prevent disquiet. But the name Epicurean is frequently given to those who derive happiness from sensual pleasure.

STOIC, 290 B. C.—The Stoics were disciples of Zeno, the philosopher (about 290 B. C.). They obtained the name because they listened to his instructions in a porch (Greek Stoa), at Athens. Zeno taught that man's supreme happiness consisted in living agreeably to nature and reason, and that God was the soul of the world.

NEO (New) PLATONISTS, 243 A. D.—This name is given to the philosopher of the school of Alexandria. who endeavored to combine the doctrines of Plato and Christianity into one system. The sect was founded by Ammonius, named Saccas (160-245), and numbered Platinus (205-270) among its most distinguished members.

CARTESIAN, 1560. Descartes Rene (Latin Renatus Cartesius), the founder of this school, was a French philosopher, born 1596, died 1650. The fundamental principles of his philosophy relate to the essential difference of spirit and matter, the thinking and the extended substances, to the demonstration of the existence of God from the very idea of the infinite. This system gave rise subsequently to the pre-established harmony of Liebnitz.

RATIONAL, 1620. Francis Bacon, who was the originator of this school of philosophy, was born in London in 1561, and died 1626. The gist of this work was a setting forth of what is called the inductive method, studying causes

from effects, and reasoning from facts to theories. His celebrated work, Novum Organum, was first printed 1603.

REFLECTIVE, OR PERCEPTIVE, 1690. The founder of this school was John Locke, born 1632, died 1704. His Essay on the Human Understanding marks an epoch in the history of philosophy. In this work, which made its appearance three years after the production of Sir Isaac Newton's *Principia,* the broad dogma is asserted that the mind does not possess innate ideas, and that all ideas, and, as a corollary, all their various combinations and associations, must be referred to as to their origin to the faculties of perception and reflection.

IDEALISTIC, 1710. The originator of this school was George Berkeley, an Irish philosopher, born 1684, died 1753. He maintained that the eye has no natural perception of space, and that all notions of distance, size and position are derived from touch. He denied the existence of matter, and argued that it is not without the mind, but within it; and that what is generally called matter is only an impression produced on the mind by means of invariable rules, called laws of nature.

COMMON SENSE, 1750-1770. Thomas Reid, the originator of this school, was born 1710, died 1796. In opposition to Hume's skepticism, he tried, in his Inquiry Into the Human Mind on the Principle of Common Sense, to establish a series of fundamental truths independent of experience, and indisputable as primitive facts of consciousness.

TRANSCENDENTAL, 1770-1860. Immanuel Kant, a German metaphysician, was the originator of this school. Rejecting all the ontological, cosmological and physico-theological proofs of the existence of God as mere futilities.

Kant based his belief in God on the inward necessities of a practical morality.

SCIENTIFIC, 1800-1814. This school was founded by a German philosopher, Johann Gottlieb Fichte, born 1762, died 1814. His philosophy was intended to amplify that of Kant, who argued that objects *per se,* as they really are, are unknown to man. The philosophical system of Fichte seems to have resolved itself into a kind of modified Theism; and of the high quality of its ethical emanations there can be but one opinion.

ABSOLUTE IDEALISM, 1810-1830. This school was founded by Georg Wilhelm Friedrich Hegel, born 1770, died 1831. The Hegelian system of philosophy is looked upon as an attempt to combine the real and the ideal, and is accounted in Germany as associating together the salient doctrines of the Pantheistic School.

EVOLUTION, 1858. In 1852 Herbert Spencer argued that species have undergone modification through change of circumstances. On July 1, 1858, two essays were read before the Linnaean Society, one by Charles Robert Darwin, entitled "On the Tendency of Species to Form Varieties, and on the Perpetuation of Species and Varieties by means of Natural Selection;" the other by Alfred Russel Wallace, entitled, "On the Tendency of Varieties to Depart Indefinitely from the Original Type." In 1859 Darwin published the treatise entitled, "On the Origin of Species by Means of Natural Selection," a work which has caused the liveliest controversy in the scientific world. His theory, supported and illustrated with the greatest ingenuity, is that there is a real variability in organisms, acting through the medium of the reproductive system; and that when the progeny so varied finds itself better adapted for the surrounding conditions than its predecessors, it gains an ascendancy

in the competition of the multitude of creatures for existence, establishes itself, and exterminates those it has vanquished.

NATURE.

Origin of Orchard and Garden Fruits.

ALMOND, native North Africa and mountains of Asia; mentioned by Tusser, in 1548, in England.

APPLE, originally the Crab, native of most countries of Europe in its wild state; origin of the cultivated apple unknown; probably introduced into Britain by the Romans, to whom, according to Pliny, A. D. 59, twenty-two varieties were known. In 1688, 87 varieties of apples were cultivated. In 1866 the Royal Horticultural Society, of London, had in its collection 1,500 varieties.

APRICOT, native of Armenia, Arabia, and higher regions of Central Asia; largely cultivated in China and Japan; name a corruption of the original Arabic term, Berkoche; said to have been brought from Italy by Wolfe, gardener to Henry VIII.

BANANA, native of the East, now indigenous to all tropical climates.

BARBERRY, a native of Eastern countries, and most parts of Europe; found in woods, coppices, and hedges in England, wild in America.

BLACKBERRY, a native of Europe and America; early cultivated.

BUTTERNUT, native of America.

CHERRY, brought from Italy by the Roman general Lucullus, in 73 B. C., from Cerasus in Pontus, Asia-Minor, whence its generic name, and introduced into Britain 120 years later, about 60 A. D.

CHESTNUT, native of Puntus in Asia, from thence introduced into Europe.

CITRON, brought to Europe from Media; cultivated in Italy by Palladius in 2d century.

CRANBERRY, native of the northern portion of both hemispheres.

CUCUMBER, native of middle and south Asia; cultivated from the earliest times.

CURRANT, a native of Britain and North of Europe; probably not known to the Greeks and Romans, the nations of southern Europe having no appropriate name for it even at this day; the French call it groseille a grappes d'outre mer, "foreign gooseberries."

EGG-PLANT, native of Africa. The Chinese are said to cook the fruit while pendent on the tree, bringing the entire plant to table.

FIG, native of Asia and Barbary; naturalized in Italy and south of France; more than twenty varieties known to the Romans.

FILBERT. Native of Europe, so named, according to Junius, from its long beard; according to Gower, from Phillis; "Phillis was shaped into a nutte tree that all men it might see; and after Phillis Philbert this tree was classed in the yerd."

GOOSEBERRY. Native of Europe and North Asia; derivation of name from gorseberry, or the resemblance of the bush to gorse; or from its being used as a sauce for young geese; does not seem to have been known to the ancients.

GRAPE. Native probably of Persia; migrated thence to Egypt, Greece, and Sicily; thence to Italy, Spain, and France, where it was cultivated in time of the Antonines, 2nd century.

HICKORY-NUT. Native of America.

LEMON. Supposed to have been introduced into Europe during the Crusades.

LIME. Native of Asia, and thence introduced into most other countries.

MELON. Nativity uncertain, probably from Persia; cultivated in England since 1570, brought from Jamaica. The term cantaloupe comes from the name of the Pope's residence near Rome, the castle Cantalupo.

MULBERRY (Black). Native of Persia, brought to Europe by the Romans, cultivated in England in 1596, by Gerard. The white mulberry is a native of China; cultivated there for its leaves, the food for silkworms; also cultivated in England since about 1540.

NECTARINE. Known in North India as moondla arool (smooth peach); cultivated in Europe, but rarer in America.

OLIVE. Is native of temperate seacoast ridges of Asia and Africa; naturalized in Southern Europe. It is named in the earliest accounts of Egypt and Greece, and at Athens its cultivation was taught by Cecrops, 155 B. C. It was first planted in Italy about 562 B. C.

ORANGE. Probably not known to the Greeks and Romans, but thought to have been brought to Europe by the Moors, and to Italy in 14th century, more than 1,000 years after the introduction of the citron.

PEACH. Native of Persia and China; brought to Italy by the Romans in the time of the Emperor Claudius. Its name is derived from Persico, its native country. The ancients regarded it with distrust, as according to Pliny, they supposed the king of Persia had sent it into Egypt to poison the inhabitants, with whom he was at war. The

Chinese have traditions of a peach-tree of knowledge, and another of immortality.

PEAR. Common in Syria, Egypt, and Greece; from the latter country taken into Italy. Theophrastus, Grecian philosopher in 14th century B. C., mentions the pear; Virgil, Roman poet, acknowledges the receipt of pears from Cato; and Pliny in 1st century boasts of the 36 varieties cultivated by the Romans, but unconsciously admits their lack of perfection by saying, "All pears whatsoever are but a heavy meat, unless they are well boiled or baked." Tusser, in 1573, describes "pears of all sorts" in England.

PECAN. Indigenous to United States.

PINEAPPLE. Native of tropical America; found in all parts of the Torrid Zone.

PLUM. Supposed to come originally from Asia Minor; according to Pliny, brought from Syria into Greece, and thence into Greece and Italy; naturalized in England and America.

POMEGRANATE. Is native of China and southern Europe; used in Languedoc and Italy as a hedge plant.

PUMPKIN. Nationality uncertain.

QUINCE. Native of Austria and other parts of Europe; derives its generic name from Cydonia, in Crete. The Greeks and Romans valued it more highly for preserving than we. Columella, Roman writer of early part of 1st century, says, "Quinces not only yield pleasure but health."

RASPBERRY. Introduced into the south of Europe from Mount Ida, in Asia Minor, which gives its specific name, Rubus Idaeis. The name probably comes from the rasping roughness of its wood (Italian raspo).

SHADDOCK. Native of China and Japan; brought to West Indies by Captain Shaddock, from whom it derives its name.

SQUASH. By some supposed to be native of the East Indies; probably indigenous to the tropics of North America.

STRAWBERRY. Native of temperate latitudes of both hemispheres of Europe, Asia, North and South America; name supposed to come from the practice of placing straw between the plants to protect the fruit.

TOMATO. Native of South America; introduced into England in 1596.

WALNUT (Juglans regia). Native of Persia; time of its introduction into Europe unknown; cultivated to some extent in America; several species are natives of America.

WATERMELON. Native of the warm climates of the old world, and introduced at an early date into other countries.

PHYSICS.

Important Inventions and Their Inventors.

AIR-GUN, 1595—MARIN.

The first account of an air-gun is found in David Rivault's Elemens d'Artillerie. He was preceptor to Louis XIII of France, and he ascribes the invention to a certair Martin, a burgher of Lisieux.

AIR-PUMP, 654—OTTO VON GUERICKE.

The air-pump of Guericke was greatly improved by Robert Bayle a few years after. Further improvements were effected by Robert Hook in 1658 and 1659.

ANCHOR, 594 B. C.—ANACHARSIS.

The form of the anchor has undergone but slight modification since the time of Anacharsis, the Scythian philosopher. Before him anchors with one arm or tooth had been a short time in use, but he first added the second.

ANEMOMETER, 1709—WOLFIUS.

An instrument for gauging the strength and velocity of the wind; the extreme velocity was found to be 93 miles per hour. Osler and Whewell also constructed anemometers in 1844, which were highly commended.

AUTOMOBILE, 1879—GEORGE B. SELDEN.

In 1879 Selden filed an application for a patent for an engine driven by gasoline, vaporized, compressed, and then exploded in the cylinder of the engine. Selden did not succeed in obtaining his patent until 16 years afterwards, in 1895. During the '80's and early '90's a number of French inventors traversed much the same ground that Selden had covered, arriving at the same conclusion in the main.

AVIATION.

The Wright Brothers first flew in a heavier than air motor-driven plane in 1903. Two of the prominent developments of 1911 were the introduction of the hydro-aeroplane and the motorless glider experiments of the Wrights, at Killdevil Hills, N. C.

BALLOON, 1783—DE MONTGOLFIER.

The brothers Montgolfier, paper makers, at Annonay, France, launched the first balloon, June 5, 1783.

BAROMETER, 1643 — EVANGELISTA TORRICELLI.

The barometer was invented by Evangelista Torricelli, a Florentine, the pupil of Galileo. Pascal improved it in 1648, and from that period great improvements have been effected by various scientific men. Wheel barometers were contrived 1668; pendant barometers 1695; and marine barometers, 1700.

BELLOWS, 539 B. C.—ANACHARSIS THE SCYTHIAN.

This contrivance was not used in the furnaces of the Romans. The construction of the great blowing apparatuses of our foundries, suggested by the diminutive domestic article, is of great antiquity, but the exact date is unknown.

CANNON, ABOUT 618 B. C.—CHINESE.

The invention of cannon is attributed to the Chinese, whose books mention them as early as 618 B. C. The invention of brass cannon is attributed to John Owen. Iron cannon were first cast in England in 1547.

CHRONOSCOPE, 1840—WHEATSTONE.

An apparatus for measuring small intervals of time. It has been applied to the velocity of projectiles and of the

electric current. Chronoscopes were invented by Pouillet and others in 1844.

CLOCK—11th Century.

Beckman assigns the invention of clocks to the 11th century, notwithstanding the statements by many writers that clocks (horologia) were in use so early as the 9th century, and that they were then invented by Pacificus, an archdeacon of Verona. The first clock was erected at Padua. Clocks were preceded by sun dials and water-clocks.

COMPASS—About 1115 B. C.—Chinese.

The mariner's compass is said to have been known to the Chinese 1115 B. C., and brought to Europe by Marco Polo A. D. 1260. Flavio Gioja, of Amalfi, a navigator of Naples, is said to have introduced the suspension of the needle 1302; its variation was discovered by Columbus 1492; the dip of the needle by Robert Normand, of Wapping, 1576; the compass-box and hanging compass by William Barlowe, 1608; and the measuring-compass by Jos. Bïng, of Hesse, 1602.

DERRICK—1850—Bïshop.

Lofty, movable, crane-like structures for lifting enormous weights on sea or land, raising sunken vessels, rigging ships, etc.

ELECTRIC CLOCK—1840—Wheatstone.

Prof. Wheatstone invented an electro-magnetic telegraph clock in 1840; clocks worked by electricity, invented by Alexander Bain and others, were exhibited 1851.

ELECTRIC LIGHT—1813—Sir Humphrey Davy.

This light was first obtained by Sir Humphrey Davy in 1813, while experimenting with the great battery of the Royal Institution in London. The important discovery of the divisibility of the electric current for the production of the Voltaic arc between carbon-points was made by Jab-

lochkoff; and the experiments of Edison in later years led to practical results.

ELECTROTYPE—1837—Spencer and Jacobi.

The art of plating by electricity was invented almost simultaneously by Spencer, of Liverpool, and Prof. Jacobi, of St. Petersburgh; in 1840 Robert Murray applied black-lead to non-metallic bodies as a conducting surface, and the same year Ruolz and Elkington applied it to gilding and silver-plating.

ENGRAVING—About 1000 B. C.—Chinese.

It is generally conceded that the Chinese practiced the art of engraving at an early period, and it is supposed that it was introduced into Europe about the middle of the 15th century; engraving on glass was perfected by Bourdier, of Paris, 1799; the earliest wood-cut in existence represents St. Christopher, with the infant Jesus, and is dated 1423.

FIRE-ARMS—1364—Invention unknown.

First made in Perugia, but did not come into general use for nearly 20 years after. The first examples were of rude construction, and required two or three men to handle each one. Their rapid improvement dates from the invention of the percussion-lock in 1807.

FIRE-ENGINE—1657—Hautsch.

Although Ctesibius is believed to have invented a species of fire-engine 250 B. C., and instruments for extinguishing fires are mentioned in the accounts for the city of Augsburgh, 1618, no distinct description of a machine of the kind exists till Hautsch, of Nuremburg, constructed his engine, about 1657.

GAS—1600-1625—Van Helmont.

Gas was first introduced by Van Helmont; he had no accurate knowledge of the gases which he produced or examined, but made the important discovery that air dimin-

ishes in bulk when bodies are burned in it. In 1792 Murdoch, of Redruth, England, conceived the project of applying gas to purposes of artificial illumination; the first gas-works were erected by him in 1798. In 1802 Lebon introduced gas distilled from wood.

GAS-METER—1815—Clegg.

The first gas-meter was invented by Clegg in 1815; the dry gas-meter was patented by Malam 1820; Defries' dry meter was patented in 1844.

GLASS—Phoenicians.

The probable inventors of glass were the Phoenicians, who are said by Pliny to have discovered its manufacture from the accidental fusion of sand and niter in a fire; it was brought to great perfection by the Sidonians. The earliest examples of glass existing, of which the dates are attested by inscriptions, are of Egyptian origin. There is no evidence that glass was employed in windows before the 3rd or 4th century. The first glass manufactory in America was established in New Hampshire in 1790. Toughened glass, or glass made malleable, was produced by M. de la Bastie in 1875.

HYDRAULIC PRESS—1796—Joseph Bramah.

The principle of this press was suggested by Pascal, but the machine itself was not invented till 1796, when Joseph Bramah patented a water-tight collar, and thus rendered it available for practical purpose.

LIGHTNING-CONDUCTOR—1752—Benjamin Franklin.

Modern lightning-conductors for the protection of buildings were first set up by Franklin shortly after 1752, when he brought down electricity from a thundercloud. Dr. Watson erected the first in England in 1762.

LITHOGRAPHY—1798—Alois Sennefelder.

This art was invented by Alois Sennefelder, a native of Prague, who produced a piece of music, his first impression from stone, in 1798. He secured a patent for his invention in 1800.

LOCOMOTIVE—1759—Watt.

The idea of the construction of a locomotive was advanced in 1759 by Watt, who patented one in 1784. Richard Trevithick made a locomotive 1804, and Bunton another, of a different description, 1813. George Stephenson's locomotive, with toothed wheels, was tried 1814; and the "Rocket," the joint production of the two Stephensons, performed an experimental trip 1829.

MATCHES—1827—Walker.

Friction matches were invented in England by Walker in 1827.

PHOTOGRAPHY—1802—Thomas Wedgwood.

The first attempt at applying the principles of photography for the delineation of external forms is to be attributed to Thomas Wedgwood, who was the first to obtain negatives. Leebeck in 1810 made some striking discoveries, and also Birard in 1812. Nicephorus Niepce in 1814 discovered what he termed heliography, or sun-drawings. Daguerreotypes were invented by Louis J. M. Daguerre in 1838, for which the French Government gave him a pension of 6,000 francs per annum.

PRINTING—1442—Johann Gutenberg.

Gutenberg established himself at Mentz in 1441, and printed two small books 1442; in 1443 he took Johann Faust, or Fust, into partnership; in 1450 he first employed cut metal types in the production of the Mazarin Bible, which appeared five years later. Peter Schoeffer, his servant, invented cast steel metal types, which were first used 1559.

SEWING-MACHINE—1841—Elias Howe.

The first really practical sewing-machine was the invention of Elias Howe, an American mechanic, of Cambridge, Mass., about 1841.

STEAM-ENGINE—1763—James Watt.

The steam-engine was invented by James Watt, an instrument-maker at the University of Glasgow, in 1763. When repairing a model Newcomen engine, he began a series of improvements which finally rendered the steam-engine universally applicable. In 1769 he patented a separate condenser; and in 1784 patented his parallel motion, throttle-valve, governor and indicator, all of which are in substance still used.

SUBMARINE NAVIGATION—1882—Goubet.

In 1882 Goubet, of Paris, constructed a submarine boat with such success as to receive an order from the Roman Government for 300 sets of his machinery. American inventors, Geo. C. Baker and J. P. Holland, have since that time built several successful types, those of Mr. Holland being used in the U. S. Navy.

TELEGRAPH—1837—Samuel F. B. Morse.

Prof. Morse conceived the idea of an electric telegraph in 1832; he gradually brought his invention into a working condition, and it was publicly exhibited in the University of New York in 1837. He obtained a patent in 1840. In 1843 Congress appropriated $30,000; and the telegraph was first brought into practical use May 27, 1844, between Washington and Baltimore. Submarine telegraphy also originated with Prof. Morse, who laid the first submarine lines in New York Harbor in 1842.

TELEPHONE—1877—Elisha Gray, A. Graham Bell, A. C. Dolbear, Thomas A. Edison.

The names most prominently associated with the inven-

tion are those of Mr. Elisha Gray, of Chicago; Prof. A. Graham Bell, of the Boston University; Prof. A. C. Dolbear, of Tuft's College, Mass.; and Mr. Thomas A. Edison, of Menlo Park, N. J.

THERMOMETER—1609—Drebbel, Sanctorius.

The invention of this instrument for measuring heat is variously ascribed to Drebbel, of Holland, 1609, and Sanctorius, of Italy, 1610, though some ascribe it to Galileo who is said to have constructed one prior to 1697. Fahrenheit's thermometer was invented about 1726; Reaumur's thermometer was known all over Europe in the beginning of the 18th century; the centigrade thermometer was invented by Celsius, 1742.

WATCH—1477.

Watches are said to have been first invented at Nuremburg, 1477, although it is affirmed that Robert, King of Scotland, had a watch about 1310. The invention of spring watches has been ascribed to Dr. Hooke, and by some to Huyghens, about 1658; the anchor escapement was invented by Clement, 1680; the horizontal watch by Graham, 1724; repeating watches invented by Barlowe, 1676; and Harrison produced his first timepiece in 1735.

WIRELESS TELEGRAPHY—1907—Marconi.

The first wireless message was flashed across the Atlantic on October 17, 1907.

MEDICINE.

Great Plagues and Epidemics.

BEFORE CHRIST.

In 767 a great plague, mentioned by Petavius, prevailed throughout the world.

In 534, at Carthage, multitudes perished by an infectious distemper; children were offered in sacrifice as an atonement with the gods.

In 461, in Rome, 100,000 persons died.

In 430, beginning in Athens, a peculiar disease, described by Thucydides, extended over Egypt and Ethiopia, causing frightful loss of life.

In 188 a plague raged throughout Egypt, Syria, and the Grecian colonies; according to Pliny, 2,000 perished every day.

ANNO DOMINI.

In 80, in and about Rome, by an infectious disease, for a considerable time, 10,000 died daily.

In 167, and again in 169 and 189, the Roman Empire suffered in almost every part by a contagious and fatal sickness.

From 250 to 265, the Empire was again ravaged; many provincial towns were depopulated; in Rome itself for some time, 5,000 died every day.

In 430 Britain was devastated by a strange disease; there were not enough survivors to bury the dead.

In 558, and during many subsequent years almost without intermission, a plague prevailed through Europe, Asia and Africa.

From 746 to 749, 200,000 Constantinopolitans died of a contagious disease, which prevailed also in Greece, Sicily and Calabria.

In 772 an epidemic disease carried off 34,000 persons at Chichester, England.

In 954, in Scotland, 40,000 persons perished.

In 1094 many died in London of an epidemic, which the following year extended into Ireland.

In 1111, a distemper in London, causing great mortality among both human beings and domestic animals.

In 1172, a plague in Ireland, which drove back the English invaders.

In 1204, in Ireland, a similar disease again appeared.

In 1267 the plague prevailed in England; mortality great.

In 1340 the "Black Death" first appeared in Italy. This plague spread throughout Christendom, and raged during many years, causing unprecedented mortality. "In London alone 200 persons were buried daily in the Charter House yard, 1348." In Germany, 1340, thousands perished.

In 1362, 1367, 1370 and 1379 there was frightful mortality in Western Europe, especially near Paris and London, and in portions of Ireland; 57,376 died in England in 1362.

In 1383 the "fourth pestilence" in Ireland destroyed many people.

In 1407, in London, a dreadful plague caused the death of 30,000 persons.

In 1466, in Ireland, a famine, followed by a fearful pestilence, caused the death of hundreds.

In 1470, the mortality in Dublin was very great.

In 1471 and 1478, at Oxford and throughout all England, a plague so destructive to human life that more people died than in any other year.

In 1485, in London, an awful distemper prevailed called Sudor Anglicus, or sweating sickness, by which very many lost their lives.

In 1499 to 1500 plague in London; the royal court was removed to Calais.

In 1506 and again in 1517 the "sweating sickness" revisited London and prevailed over all England; the mortality was frightful, the disease proving fatal in three hours; half the inhabitants died in most of the large towns; some towns being depopulated.

In 1522, Limerick was devastated by a plague by which many thousands lost their lives.

In 1528, in England, the "sweating sickness" again made its appearance; North Germany was also visited by it in 1529, and England ravaged for the fifth time in 1548 and 1551.

In 1603 and 1604 dreadful mortality in England by the plague; in London alone 30,578 persons perished; Ireland also suffered severely by it.

In 1625 London again visited by a fearful plague; the mortality great; 35,417 persons died.

In 1632, in France, large numbers perished; at Lyons alone 60,000 died.

In 1656, at Naples, the plague raged with such violence that it carried off 400,000 persons in six months; it had been brought by a transport with soldiers on board from Sardinia.

In 1664 and 1665 the great plague of London is said to have swept away 68,596 persons; some say 100,000; to destroy the contagion fires were kept burning day and night; but not until the great fire of London in 1666 was the city free from infection.

In 1720, at Marseilles and vicinity, 60,000 perished by the plague, which was brought in a ship from the Levant.

In 1741 and 1742 New York City was visited by yellow fever.

In 1773 infectious distemper in Persia; 80,000 died in Bassora.

In 1773 Saulica, in France, was visited by a putrid fever, which broke out at the opening of a grave; out of 180 persons present, 174 were attacked.

In 1784, at Smyrna, 20,000 people were carried off by the plague; it raged in Tunis the same year.

In 1791 and 1795 and 1798 yellow fever along Atlantic coast. In Baltimore, Philadelphia, and New York; in the latter city one out of every twenty-seven died; in and about Philadelphia several thousands died—117 in one day, and 50,000 out of 70,000 inhabitants fled from the city.

In 1804 and 1805 pestilence in Spain and Gibraltar.

In 1805 yellow fever in North American ports; 37,000 out of a total population of 70,000 fled from New York City.

In 1814 plague desolated Asia Minor, Palestine, and Grecian Archipelago; Smyrna lost 30,000.

In 1817 the spasmodic or Asiatic cholera appeared in India, at Jesson, about a hundred miles northeast of Calcutta.

In 1817 the city of Calcutta was attacked by cholera, and its ravages soon extended to Behar, Benares, Allahabad, Lucknow, Delhi, and many other towns; it carried off a large proportion of soldiers, both European and natives, and ravaged many parts of India.

In 1818 cholera visited Bombay; from thence spread into Ceylon, Siam, Malacca, China, and the Islands of Mauritius and Bourbon, carrying off vast numbers.

In 1819 and 1822 great alarm in seaports of United

States because of spread of yellow fever, but mortality was not so great as on former occasions.

In 1823 the cholera extended to the Mediterranean Sea. Aleppo, Antioch and other places were visited by it.

In 1828 epidemic fever at Gibraltar—great mortality.

In 1830 Astrakhan visited by cholera; it soon advanced up the River Volga and into the heart of Russia in Europe, attacking many towns, until it reached Moscow, where it continued four months; 8,576 were attacked, of whom 4,630 died.

In 1830, at Sunderland, the Asiatic cholera first made its appearance in England. Haddington, in Scotland, was visited the same year.

In 1831 the Russian and Polish armies were attacked in their encampments by cholera; at Warsaw in seven weeks 3,012 were taken ill, of whom 1,462 died; its ravages continued in Poland; it appeared at St. Petersburg, in Russia, same year; and 7,567 cases were reported, of whom 3,804 died in forty-eight days. Hamburgh, in Germany, also suffered.

In 1832 cholera first appeared at Belfast, Ireland, and at many places in Great Britain—Newcastle, Edinburgh, Greenock, London, Dublin, etc., but until January 1, 1832, the mortality did not exceed 6,000 in both islands.

In 1832 Paris visited by cholera, mortality in sixteen days amounted to more than 8,000; it continued in Paris for some weeks, and the total mortality in that city has been estimated at 15,000, out of a population of 750,000.

In 1832 cholera crossed the Atlantic Ocean and appeared at Quebec and Montreal; about 2,000 in each of these cities died. The city of New York was visited by cholera the same year; in less than two months 6,000 persons had been attacked, of whom 3,000 died, one-third of the inhabi-

tants having left the city. The distemper spread to Albany, Brooklyn, Rochester, Buffalo and other towns in the State of New York, and afterward to Philadelphia, Newcastle, Baltimore, Norfolk, Portsmouth, Petersburg, and Richmond.

In 1865 at Smyrna and Constantinople large numbers perished by cholera; it also appeared at Paris, Marseilles, and Naples, from July to December.

In 1878 yellow fever raged in Southern towns, especially Memphis.

In 1884, 1885 and 1892 cholera raged over Europe.

DIPLOMACY.

Treaties of the World.

1140.—Hanseatic League projected between the port-towns and cities of Germany against the Swedish Pirates; signed 1241.

1272.—First treaty of commerce made by England with any foreign nation was with Flanders, time of Edward I.; the second with Portugal and Spain, 1308, Edward II.

1420.—Troyes, treaty between England, France and Burgundy, to secure to Henry V. the throne of France, after the death of Charles VI.

1508.—League of Cambray, between Pope Julius II., Maximilian, Louis XII., of France, and Ferdinand of Spain against the republic of Venice.

1530.—League of Schmalkald entered into by the Elector of Bradenburg and the other princes of Germany as a defense against Charles V. and in favor of Protestantism

1555, Sept. 15.—"Peace of Religion," signed at Augsburg, between Catholics and Protestants.

1576-93.—Holy League of French Roman Catholics formed by the Duke of Guise, at Peronne, as a barrier to the succession of Henry IV., who was a Protestant. Dissolved in 1593, when the king became a Roman Catholic.

1620, July 3.—Treaty of Ulm, between the Emperor Ferdinand II., the dukes of Bavaria, the kings of Spain and of Poland, the elector of Saxony, the Pope, and the Roman Catholic League on one hand, and the king of Bohemia and the allied princes of the Protestant Union of Germany.

1630, Oct. 13.—Ratisbon, peace concluded between France and Germany.

1648, Aug. 6.—First peace of Westphalia concluded between Germany and Sweden; terminated the "Thirty Years' War."

1668, Jan. 23.—Alliance between the States-General and England against France to protect the Spanish Netherlands; Sweden joined the league April 25, thereafter known as the "Triple Alliance."

1668, Feb. 13.—Lisbon, peace between Spain and Portugal. Defensive alliance with Great Britain signed at Lisbon, May 16, 1903, and treaties of commerce, Dec. 27, 1702, and July 3, 1842.

1674, Feb. 19.—Westminster, peace concluded between England and Holland.

1683, March 31.—Warsaw, alliance between Austria and Poland against Turkey.

1697, Sept. 20—Ryswick, peace concluded between England, France, Spain and Holland, and signed by Germany, Oct. 30, 1697.

1686, July 9.—League of Augsburg, Holland, and other powers against France.

1718, Aug. 12.—Quadruple Alliance, concluded by Great Britain, France and Germany; Holland acceded to it Feb., 1719, whence it obtained its name. The alliance signed at London, April 22, 1834, between England, France, Portugal and Spain, is also known as the Quadruple Alliance.

1721, Aug. 30.—Nystadt, between Peter the Great of Russia and Sweden.

1724, March 24.—Treaty of Stockholm, between Sweden and Russia.

1763, Feb. 10.—Peace of Paris; Canada ceded to England.

1763, Feb. 15.—Hubertsburg, peace between Austria,

Prussia and Bavaria, by which the "Seven Years' War" was ended.

1768, Feb. 24.—Warsaw, treaty entered into between Russia and Poland.

1772, Aug. 5.—Treaty of St. Petersburg for the partition of Poland between Russia, Prussia and Austria.

1783, Sept. 3.—Peace of Versailles between England and France.

1783, Sept. 13.—Definite treaty of peace between Prussia and Austria signed at Paris.

1790, Aug. 5.—Preliminaries of peace between Prussia and Austria signed at Reichenbach. In 1791 Congress convened here by the English ministry to form an alliance against Russian aggression. The treaty that laid the foundation of the grand alliance against Napoleon I, was signed here June 14, 1813; Austria gave her adherence to it June 27.

1802, March 27.—Peace of Amiens, entered into by Great Britain, France, Spain and Holland.

1805, April 11.—Alliance between Great Britain and Russia against Napoleon I.

1805, Aug. 5.—Combination between Great Britain, Russia, Austria and Naples, against France.

1806, Aug. 1.—Confederation of the Rhine. League of the Germanic states, formed by Napoleon Bonaparte.

1806, Oct. 6.—Alliance between Great Britain, Russia, Prussia and Saxony against France.

1807, July 7.—Peace of Tilsit, between France and Russia.

1809, April 6.—Alliance between England and Austria against France.

1809, Oct. 14.—Vienna, peace between Napoleon I and Austria.

1813, March 17.—Alliance between Russia and Prussia.

1813, June 14 and 15.—Reichenbach, alliance between Russia, Prussia and England against France; alliance soon after joined by Austria.

1813, Sept. 9.—Toplitz, treaty between Austria, Russia and Prussia.

1813, Oct. 3.—Toplitz, treaty between Austria and Great Britain.

1814. Jan. 14.—Treaty of Kiel concluded between Denmark, Sweden and Great Britain.

1814, Dec. 24.—Ghent, peace between Great Britain and United States.

1815, March 25.—Vienna, alliance concluded between Great Britain, Austria, Russia and Prussia. March 27.—France accedes to the alliance. May 31.—A treaty concluded between Holland on one side and Great Britain, Austria, Prussia and Russia on the other. June 9.—The general congress treaty signed.

1815, Sept. 26.—Alliance, known as holy alliance between Russia, Austria and Prussia, ratified at Paris, joined afterward by nearly all European powers.

1846, June 12.—Washington Treaty, between Great Britain and the United States, fixing boundary of British America and United States.

1854, June 7.—Washington reciprocity between England and United States, regulating trade with Canada.

1855, Nov. 21.—Treaty between England, France and Sweden.

1856, April.—Peace concluded between France and Russia.

1858, Aug. 26.—Treaty of Jeddo between Great Britain and Japan.

1859, Nov. 10.—Zurich, peace concluded between Austria, France and Sardinia.

1864, Oct. 30.—Vienna, peace between Austria, Prussia and Denmark.

1871, May 18.—Washington, treaty between England and United States, settling Alabama claims.

1871, May 10.—Frankfort, peace between France and Germany.

1878, March 3.—San Stefano, peace between Russia and Turkey.

1878, July 13.—Berlin treaty, entered into by Germany, Russia, Turkey, Great Britain, Austria, France, and Italy. Ratified Aug. 3, 1878.

1881—Second treaty between United States and China.

SOCIOLOGY.

Distinguished Women.

ADAMS, Abigail. Am. writer. Wife pres. J. Adams 1744-1818
ADAMS, Hannah. American authoress 1755-1831
ADELAIDE. Queen of England. Consort William IV. 1792-1849
ADORNI, Caterini Fieschi. Italian poetess ... 1447-1510
AGOSTINA. Maid of Saragossa. Spanish heroine 1826
AGOULT,D', Marie Catherine. Fr. authoress.. 1800 ....
ALBRET,D', Jeanne. Queen of Navaree..... 1528-1572
ALBRIZZI, Isabella. Italian authoress 1770-1836
ALCAFORADA, Marianna. Portuguese nun. fl. 1662
ALCOTT, Louisa May. American authoress .. 1833 ....
ALEXANDRA, Dowager. Queen of England. 1844 ....
ALMEIDA,DE, Brites. Portuguese Joan of Arc ..... fl. 1386
ANGOULEME,D', Marie, Duchess. Daugh. Louis XVI. 1778-1851
ANNA COMNENA. Byzantine historian..... 1083-1148
ANNA, Ivanovna. Empress of Russia 1693-1740
ANNE of Austria. Wife of Louis XIII of France 1602-1666
ANNE of Brittany. Queen-consort of France.. 1476-1514
ANNE of Cleves. Fourth queen of Henry VIII. 1557
ANNE. Queen of England 1664-1714
ANTHONY, Susan B. Am. advocate women's rights ..... 1820 ....

ANTONIA, Major. Rom. lady, grandmother of Nero ..... B. C. 39
ANTONIA, Minor. Mother of Germanicus B. C. 36-A. D. 37
ARSINOE. Daughter of Ptolemy I., king of Egypt ..... B. C. 316
ARTEMISIA. Queen of Halicarnassus.....fl. B. C. 480
ASKEW, Anne. English Lutheran martyr 1529-1546
ASPIA of Miletus. Mistress of Pericles ..... B. C.-432
ATHALIAH. Queen of Judah ..... B. C. 878
ATHENAIS. Empress of the East ..... 4th c.
AYESHAH. Favorite wife of Mohammed.... 611-677
BACHE, Sarah. Nurse of Am. Rev. wounded soldiers 1745-1808
BACCIOCHI, Marie A. E. B. Eldest sister Emp. Nap. 1777-1820
BACCIOCHI, Napolene. Bonapartist princess..1806-1869
BAILLIE, Johanna. Scottish poetess 1762-1851
BARBARA, Saint. Christian martyr 235
BARRY, DU, Marie J. Comtesse. Mistress Louis XV. 1746-1793
BARTON, Clara. Am. army and hospital nurse, reformer .....
BARTON, Elizabeth. Holy Maid of Kent. Eng. fanatic 1534
BEATRICE PORTINARI. Flor. lady, immortal. by Dante 1266-1290
BEECHER, Catharine E. American authoress. 1800-1878
BEKKER, Elizabeth. Dutch novelist and poetess 1738-1804
BELGIOJOSO, Christina T. Princess of. It. pat. & writ. 1808-1871
BELLINI, Guisepa. Countess of. Ital. philanthropist 1776-1837

BERENICE. Jewish Queen. Favorite of Titus 28 aft. 70
BERRY, Caroline. Daugh. Fer. I., k. Two Sicilies 1798-1870
BERTHA. Title of several famous women of Middle Ages.
BIHERON, Marie Catherine. French anatomist 1719-1786
BISHOP, Mad. Anna. Celebrated Eng. singer.. 1814 ....
BLACKWELL, Elizabeth. First woman U. S. rec. deg. M. D. ..... 1821 .....
BLACKWELL, Rev. Antoinette Brown. Cong. minister ..... 1814 ....
BLANCHE of Castile. Queen of France 1789-1849
BLESSINGTON, Margaret. Countess of. Irish woman let. 1789-1849
BLOCH, Joanna Koerten. Dutch female artist.. 1650-1715
BOCCAGE, du, Marie Anne Le Page. Fr. poetess 1710-1802
BOLEYN, Anne. Wife of Henry VIII. of England 1507-1536
BONAPARTE, Ramolina Marie L. Mother of Napoleon 1748-1836
BORA, von, Katharina. Wife of Martin Luther. 1499-1552
BORGHESE, Maria Pauline Bonaparte, Princess 1780-1825
BORGALIA, Lucrezia. Duchess of Ferrara 1523
BONHEUR, Mlle. Rosalie, called Rosa. Fr. painter 1822-1899
BURDETT-COUTTS, Angelia, Baroness. Eng. philan 1814-1906
BOURIGNON, Antoinette. Flem. fanatic 1616-1680
BOUVIER, Hannah M. Am. writer on astronomy ..... 1811 .....
BRACE, Julia. American deaf and blind mute.. 1806 .....
BRAY, Mrs. Anna Eliz. American authoress.. about 1800

BRADSTREET, Anne. New Engl'd poetess..1612-1672
BRIDGET, Saint. Patroness of Ireland 1302-1373
BROGLIE, de, Albertine de Stael, Duchesse. Fr. writer 1797-1838
BROWNING, Elizabeth Barrett. English poetess 1809-1861
BRINVILLIERS, de, Marie Marguerite. Fr. poisoner 1676
BRUNEHART. Consort of Sigebert of Australia 613
CAPELLO, Bianca. Grand Duchess of Tuscany 1542-1587
CAROLINE AMELIA AUGUSTA. Queen of England 1768-1821
CARPENTER, Mary. American philanthropist 1807-1877
CARY (ka'ri), Alice. American poetess 1820-1871
CARY, Phoebe. American poetess 1824-1871
CASTRO, de, Ines. Wife of Don Pedro of Portugal 1355
CATHERINE of Aragon. Queen of England.1486-1536
CATHERINE of Braganza, Queen of Chas. II. of Eng. 1638-1705
CATHERINE of Valois. Queen Henry V. of Eng. 1401-1437
CATHERINE, Parr. Sixth wife of Henry VIII 1513-1548
CATHERINE I. Empress of Russia 1685-1727
CATHERINE II. Empress of Russia 1729-1796
CATHERINE, Saint of Alexandria 307
CATHERINE de 'MEDICI. Queen of Henry II. of Fr. 1519-1589
CECILIA, Saint. Roman martyr & patroness of music .....fl. 2d or 3d c
CELESTE, Madame. English French dancer & actress 1814-1882

CENCI, B. Roman girl famous for beauty & tragical fate 1583-1599
CHARRIERE, de, I. A. de Saint-Hyacinthe. Fr. novelist 1740-1805
CHARLEVOIX, de, P. F. X. Jesuit missionary in Am. 1682-1761
CHATELET-LOMONT du, Gabrille E. French savante 1706-1749
CHERON, E. S. French poetess, writer & painter 1648-1711
CHEVREUSE, de, Marrie M. French beauty & intriguer 1600-1679
CHILD, L. M. American philanthropist & authoress 1802-1880
CHIMAY, de, J. T. French beauty & leader of fashion 1775-1835
CHINCHON. Countess of. Int. Peruvian bark into Sp. fl. 1632
CHRISTINA. Queen of Sweden 1626-1689
CHRISTINE de PISAN. Italian poetess in France 1363-1431
CLEOPATRA. Queen of Egypt ..... B. C. 69-30
CLOTILDA, or CLOTILDE, Saint. Wife of Clovis 475-545
COLONNA, Vittoria. Italian poetess 1490-1547
CONANT, Hannah O. K. American author & translator 1812-1865
CORDAY d'ARMANS, de, Mariane C. French heroine 1768-1793
CORNELIA. Roman matron ..... fl. 2d c. B.
CORNWALLIS, Caroline F. English poet, essayist, etc. 1786-1858
CRUZ, de la, Juana Ines. Mexican poetess 1651-1695

CUMMINS, Maria S. American novelist 1827-1866
CUSHMAN, Charlotte Saunders. American actress 1816-1876
D'ARUSMONT, Frances (Fanny Wright). Am. reform 1795-1852
DABENTONE, Jeanne. French prophetess & martyr 1372
DACIER, Anne Tanneguy L. French Greek scholar 1654-1720
DAMOPHYLE. Greek female poet .....B. C. 610
DARE, Virginia. First white child born in America .....1587 .....
DARLING, Grace, of Farne Island. English heroine 1815-1842
DAUN, daughter of Pythagoras .....7th c. B. C.
DAVIDSON, Lucretia Maria. American poetess 1808-1825
DAVIDSON, Margaret Miller. American poetess 1823-1837
DEKEN, Agatha. Dutch authoress 1741-1804
DIANE di, Poitiers. Fr. lady favorite of Henry II 1499-1566
DICKENSON, Anna Elizabeth. American lecturer .....1842 ....
DIX, Dorothea Lynde. American philanthropist.1794 ....
DODGE, Mary Abigail. *Gail Hamilton.* Am. authoress .....1838 ....
DOGGETT, Kate Newell. Am. advo. woman's rights .....
DONNE, Marie Dalle. American woman doctor 1776-1842
DORA D' ISTRIA, Pseud? of P'ces HELEN GHIKA, au. .....1829 ....

DOREMUS, Sarah Platt. American philanthropist 1798-1877
DROSTE-HULSHOFF, Annette E. German lyric poet 1798-1848
DU CHATELET, G. E. de Tonnelier de Breteuli. Fr. author 1706-1749
DU DEFFAND, Marie de V. Chamond. Mar. Cel. Fr. woman 1697-1780
DUDEVANT, Mad. A. L. A. nee Dupin. Fr. novelist 1804-1876
DUFRENOY, Adelaide Gilette-Billet. Fr. poetess 1765-1825
DURINGSFELD, VON, Ida. German authoress 1815-1876
DYER, Mary. Quaker martyr, hanged on Boston common 1660
EASTMAN, Mrs. Mary H. Am. author & nov. about ..... 1818 ....
EDGEWORTH, Maria. English novelist 1767-1849
EHRMANN, Marianne, nee Brentano. Swiss authoress 1775-1795
ELEANOR of Guienne, wife of Henry VII of England 1122-1204
ELIOT, George. See Evans, Marian 1820-1880
ELIZABETH. Queen of England 1533-1603
ELIZABETH, Saint. Elizabeth of Hungary... 1207-1231
ELIZABETH-PETROVNA. Empress of Russia 1709-1762
ELIZABETH STUART, of Bohemia, daughter of Jas. I 1596-1662
ELLENRIEDER, Marie. Famous German painter 1791-1863
ERINA. Greek poetess .....

ERXLEBEN, Dorothy C. L. Mad. Em. Ger. physician 1715-1762
ESPINASSE, de l', Julie. Fr. lady, remark. for soc. ac. 1732-1776
ETAMPES, d', Anne, Duchess. Mistress of Francis I 1508-1576
ETHELRIDA, St. Daughter of the king of the East Angles ..... 7th c.
EUDOCIA. Roman empress 394- 461
EUGENIE. Empress of France. Wife of Nap. III .....1826 ....
FAILEY, Harriet. American philanthropic writer .....1847 ....
FARNHAM, Eliza W. American philanthropist 1815-1864
FATIMA (fa' te-ma). Only daughter of Mohammed 632
FAUGERES, Margarette V. American authoress & teacher 1771-1801
FAVART, Marie Justine Benoite. French actress 1727-1772
FEDOROWNA, Maria. Empress of Russia...1759-1828
FITZHERBERT, Maria. Wife of George IV of England 1756-1837
FONSECA, de Eleonora. Neapolitan heroine & martyr 1758-1799
FOSTER, Ellen Horten. American lawyer...
FRANKLIN, Jane, Lady. Wife of celebrated Arctic exp. .....1875 ....
FREDEGONDE. Wife of Chilperic I, of Fr.. 545- 596
GALLITZIN, Elizabeth. Founder of R. C. Sacred Heart N. Y. 1796-1843
GAMBARA, Veronica. Italian poetess 1485-1550

GARFIELD, Lucretia. Wife of President Garfield ..... 1837 ....
GARRETTSON, Mary R. American philanthropist 1782-1869
GENEVIEVE, Saint. Patron saint of Paris.. 422- 512
GEOFFRIN, Marie T. R. Fr. social leader .. 1699-1777
GODIVA. Wife of Leofric, Earl of Leicester. Eng. heroine ..... fl. 11th c.
GOLDSCHMIDT, Madame Jenny Lind. Swedish singer 1821-1887
GORE, Mrs. Charles. English novelist 1799-1861
GOULD, Hannah Flagg. American poetess... 1789-1865
GRAHAM, Isabella. Scottish philanthropist in America 1742-1814
GREY, Lady Jane. Noble and gifted English lady 1537-1554
GUIZOT, Elizabeth. Fr. authoress, editor of Le Publiciste 1773-1827
HALE, Sarah Josepha, nee Buell. American authoress 1795-1879
HALL, Louisa Jane. American poetess ..... 1837 ....
HALL, Mrs. S. C. (Anna Maria Fielding). Irish authoress 1805-1881
HANAFORD, Phoebe A. American authoress & preacher ..... 1829 ....
HART, Nancy. American heroine .....
HECK, Barbara. Foundress of American Methodism 1734-1804
HELOISE. Abbess of the Paraclete, friend of Abelard 1101-1164
HENRIETTA MARIA. Queen of England.. 1609-1669
HENTZ, Caroline Lee, nee Whiting. American authoress 1809-1856

HERSCHEL, Caroline Lucretia. Astronomer. 1750-1848
HOFIAND, Barbara. English authoress 1770-1848
HOOPER, Lucy. American poetess 1816-1841
HORTENSE, Eugenie. Wife Louis Bonaparte & Queen of Holland 1783-1847
HOWE, Julia Ward. Wife of S. G. H. Am. poetess ..... 1819 ....
HULETT, Alta M. First woman lawyer of Illinois .....
HUNTINGDON, S., Countess of. Patron Eng. Calv. Meth. 1707-1791
HUTCHINSON, Anne. American religious enthusiast 1591-1643
HYPATIA, of Alexandria. Mathematician and philosopher 370- 415
INGELOW, Jean. English poetess ..... 1830 ....
IRENE. Empress of Constantinople 752- 803
ISABELLA I. Queen of Cast. & Leon. Patron of Columbus 1451-1504
ISABELLA II (Marie Isabel Luisa). Ex-queen of Spain 1830-1904
ISABELLE, of France. Queen of England. Wife of Edw. II 1308-1358
JEANNE d' ALBRET, or JOAN. Queen of Navarre 1528-1572
JOAN OF ARC. The Maid of Orleans. French heroine 1411-1431
JOANNA I. Queen of Naples 1327-1382
JOHNSON, Mary Anne. Reformer 1808-1872
JOSEPHINE. Empress of France. Wife of Nap. I 1763-1814
JUDITH. Distinguished woman of 2d century B. C. .....

KARSCH, Anna L. *The German Sappho.* German poetess 1722-1791
KAUFFMANN, Maria A. Swiss painter 1741-1807
KAVANAGH, Julia. Irish authoress 1824-1877
KEAN, Ellen (Tree). English actress ..... 1805 ....
KEENE, Laura. American actress 1820-1873
KELLOGG, Clara Louise. American singer ... 1842 ....
KEMBLE, Frances Anne. Fanny Kemble. English actress 1811-1893
KENNEDY, Grace. Scotch authoress 1782-1825
KIRKLAND, Caroline Matilda. American authoress 1801-1864
KILLEGREW, Anne. English poetess and artist 1660-1685
KINGSTON, Eliz. Chudleigh. Duchess of England. Beauty 1720-1788
KONIGSMARK, VON, Maria, Countess. Moth. Mar. Saxe 1670-1728
KRUDENER, de, J. de Vietinghoff. Baroness Rus. mystic 1764-1824
LABE, Louise. *La belle Cordiere.* French poetess 1526-1566
LACRUZ, de, Juana Inez. Mexican poetess... 1651-1695
LAFAYETTE, Marie, Comtesse de. Novelist. 1633-1693
LAMBALLE, de, Marie. Princess of. Murd. in Fr. rev. 1749-1792
LANDER, Louisa. American sculptor ..... 1835 ....
LANDON, Letitia Elizabeth. L. E. L. English poetess 1802-1838
LARCOM, Lucy. American authoress and poetess 1826-1893
LE COUVREUR, Adrienne. French actress.. 1690-1730
LEE, Ann. Founder Shakers in America 1736-1784

LE VERT, Octavia W. Am. linguist and philanthropist ..... 1810 ....
LIND, Jenny (Mrs. Goldschmidt). Swedish singer ..... 1821 ....
LOLA, Montez. Creole ballet dancer and adventuress 1824-1861
LUCRETIA. Roman woman, illustrious for her virtue ..... B. C. 510
McAULEY, Cath. E. Irish philan. Fdr. Sisters of Mercy 1787-1841
MacDONALD, Flora. Scottish heroine 1720-1790
MAINTENON, de, Francoise. Consort to Louis XIV 1635-1719
MANCINI, Hortense. Duchess of Mazarin. Italian beauty 1646-1699
MANLEY, Mary de la Riviere. English authoress 1672-1724
MARGARET of Anjou. Queen of Henry VI of England 1429-1482
MARGARET of Austria. Regent of the Netherlands 1480-1530
MARGARET of Denmark. Queen of Northern Denmark and Sweden 1353-1412
MARGARET. Queen of Navarre and author.. 1492-1549
MARGARET, Saint. Virgin of Antioch and martyr 275
MARGARET. Queen and patron saint of Scotland 1046-1093
MARGARET of Valois. Queen of France 1553-1615
MARIA CHRISTINA. Queen dowager of Spain 1806-1878
MARIA II DA GLORIA. Queen of Portugal. 1819-1853
MARIA de MEDICI. Queen of France 1573-1642

MARIA LOUISA. Empress of France 1791-1847
MARIA THERESA. Empress Germany & queen Hungary & Bohemia 1717-1780
MARIE AMELIE. Wife of Louis Philippe...1782-1866
MARIE ANTOINETTE, Jos. H. Wife of Louis XVI of France 1755-1793
MARS, Anne Francoise. Hyp. Boutet. French actress 1779-1847
MARY I. Bloody Queen Mary. Queen of England 1516-1558
MARY II. Wife of William III of England ..1662-1694
MARY STUART. Queen of Scots. Beheaded 1542-1587
MASHAM, Abigail Hill. Favorite of Queen Anne 1670-1734
MITCHELL, Miss Maria. American astronomer 1818-1889
MONTESPAN, de, Francoise. Mistress of Louis XIV 1641-1707
MONTPENSIER, de, Anne Duchesse. French princess 1627-1693
MORANDI-MANZOLINI, Anna. Italian anat. and modeler 1716-1774
MORATA, Olympia Fulvia. Italian authoress.1526-1555
MOTT, Lucretia, nee Coffin. American social reformer .....1793 ....
MOTTE, Rebecca Brewton. American heroine.1740-1815
MUHLBACH, Luise (Mrs. Theo. Mundt). German novelist 1814-1873
NAIRNE, Carolina Oliphant. Scottish poet ..1766-1845
NIGHTINGALE, Florence. English philanthropist .....1820 ....

NILLSON, Christine. Mme. Rouzoud. Swedish singer ..... 1843 ....
NORICKEE, May Alcott. Successful painter..... 1879
NOVELLA. Learned and beautiful Italian lady 1312-1366
OCTAVIA. *Sister Emperor Augustus, wife of Mark Antony* ..... B. C. 70-B. C. 11
O'GORMAN, Edith. Escaped Nun, and lecturer .....
OLIPHANT, Mrs. Margaret. Scottish novelist 1820-1897
O'NEILL, Eliza. Irish actress 1795-1872
OSGOOD, Mrs. Helen L. Noted American army nurse 1835-1868
OSGOOD, Frances Sargent, nee Locke. American poetess 1811-1850
PASTA, Giuditta. Italian singer 1798-1865
PATTI, Adelina M., Marquise de Caux. Italian singer ..... 1843 ....
PEABODY, Elizabeth Palmer. Educator and writer 1804-1894
POCAHONTAS. Daughter of the Indian chief Powhatan 1595-1617
POMPADOUR, de, Madame J. Mistress of Louis XV 1721-1764
PROCTOR, Adelaide Anne. English poetess.. 1825-1864
PULCHERIA. Empress of the East ..... B. C. 453-399
RAMBOUILLET, Cath., Marquise de. Italian leader of society 1588-1665
RECAMIER, Jeanne, Madame. Accomplished French lady 1777-1849
REMUSAT, de, Claire E. J. Countess. French writer 1780-1821
RISTORI, Adelaide, Marchioness del Grillo. Italian actress 1821-1906

ROBINSON, Therese. Talvi. German authoress 1797-1870
ROLAND, Madame Marie Philipon. French Girondist 1754-1793
ROSSI, Properziade. Italian artist 1495-1530
SAPPHO. Greek lyric poetess ..... fl. B. C. 600
SCUDERY, de, Mlle. Madeleine. French authoress 1607-1701
SEDGWICK, Catherine Maria. American authoress 1789-1867
SEMIRAMIS. Queen of Assyria ..... fl. B. C. 2000
SEWARD, Anna. English authoress 1747-1809
SIDDONS, Sarah, nee Kemble. English tragic actress 1755-1831
SIGOURNEY, Lydia Howard Huntley. American authoress 1791-1865
SIRANI, Elizabetta. Italian artist 1638-1665
SMITH, Elizabeth Oakes. American author ..
SONTAG, Mme. Henriette, Countess Rossi. German vocalist 1806-1854
STAEL-HOLSTEIN, de, Baronne. French author & leader in soc. 1766-1817
STONE, Lucy. American advocate of "woman's rights" 1818-1893
STOWE, Mrs. Harriet E. B. American authoress 1812-1896
SWETCHINE, or SVETCHIN, Anne S. French authoress 1782-1857
TAMBRONI, Clotilda. Italian authoress 1758-1817
TAYLOR, Jane. English authoress 1783-1824
TERHUNE, Mary Virginia. American authoress ..... 1835 ....
THEODELINDA. Bavarian princess ..... A. D. 625

THEODORA. Empress of the East 548
THERESA, St. Spanish nun and mystic writer 1515-1582
THEROIGNE de MERICOURT. French revolutionist 1762-1817
TIGHE (ti), Mrs. Mary, nee Blachford. Irish poetess 1773-1810
TONNA, Charlotte Elizabeth. English authoress 1792-1846
TRIMMER, Sarah. English authoress 1741-1810
TROLLOPE, Frances, nee Milton. English authoress 1778-1863
VALLIERE, de la, Mlle. F. L. Favorite of Louis XIV of France 1644-1710
VICTORIA. Queen of Great Britain and Ireland and empire of India 1819-1901
WARNER, S. Elizabeth Wetherell. American authoress 1818-1885
WARREN, Mercy. American authoress 1728-1814
WASHINGTON, Martha. Wife of Geo. Washington 1732-1802
WELBY, Amelia B. American poetess 1821-1852
WHEATLEY, Phillis. American negro poetess born in Africa 1753-1794
WILKINSON, Jemima. American religious imposter 1759-1819
WOLZOGEN, von, Caroline. German authoress 1763-1847
WRIGHT, Frances. Scottish social reformer.. 1795-1852
ZENOBIA, Septimia. Queen of Palmyra ..... aft. 274
ZOBEIDAH. Wife of Haroun-al-Rashid 765- 831

THE DRAMA.

THE CHINESE DRAMA.—The Chinese drama throws a strong light upon China, past and present, and teaches us the private views and feelings of five hundred millions of human beings, among whom civilization dawned centuries before we began to emerge from barbarism. It is not our aim within the narrow limits of this article to treat the subject exhaustively; such a plan is manifestly impossible; moreover, a comprehensive account of the Chinese drama is beyond our powers, for it can only be written by those who know China as fully as their own country.

If we could gauge the dramatic importance of any country by the number of plays it has produced, China would undeniably hold the first rank; those written during the Youen dynasty alone fill about five hundred ordinary volumes. All these plays are varied—perhaps more so than those of any other country—according to the age in which they saw the light. During the epoch preceding the eighth century, and commonly called that of the Soue dynasty, the native stage was in its infancy, and none of its efforts deserve to be remembered, though they have received the collective name of "The Amusements of Quiet Streets." It is curious to note that each division of Chinese dramatic history has a designation of its own. Thus, that of the Thang dynasty—from the eighth to the eighteenth centuries— is entitled "The Music of the Pear-Garden," and that of the Song dynasty, which immediately followed the former, is called "The Amusements of the Flowering Forest." The Songs held the throne until the 14th century, when they were succeeded by the Youen or Mongol line. These five centuries are the Golden Age, and their productions have

the name of "The Joys of Assured Peace." The tragedies belonging to this era are known as the "Tsakee." A Jesuit missionary first made known to Europeans, in 1735, a tragedy, whose title signifies "The Little Orphan of the House of Tchao," founded on an earlier piece which treats of the fortunes of an heir to the imperial throne. Voltaire selected the latter as the theme of a rhetorical play, in which he professes to "describe the manners of the Chinese and Tartars."

THE JAPANESE DRAMA.—In Japan the drama has reached its present development slowly, and with great difficulty. Caste distinctions hindered its rise, for the actors ranked next to the eta, or outcast class, in the old feudal days, and their playhouses were under the ban. Only the middle and lower classes patronized them, the nobles never attended any public exhibition, and all women were excluded. It was not until the golden age of the Tokugawas that the drama began to win recognition. Theatres were built by command of the shoguns, and the marionette shows were succeeded by living actors.

The Japanese word for lyric drama is a word which recalls nothing so much as the quaint Japanese pictures of some ancient court lady in her flowing robes of rich brocade and long veil of falling hair. From this vague description the reader may fancy the Japanese lyric muse to be somewhat disheveled, but the reverse is true, for the utmost simplicity is shown in architecture, in scenery and in general surroundings, whenever she calls together true admirers of her art.

THE HINDU DRAMA. The Hindu plays which now exist are written for the most part in Sanskrit, although not a living language at the time they were composed. The dramatic art appears to have flourished in India during a

period of several ages, ending about the 14th or 15th centuries of our era. Dramatic criticism was also much cultivated; and the most minute and artificial rules are laid down by Hindu commentators as to the conduct of a piece, the requisite ethics, the formal arrangement, and the characters which must be introduced. The Hindu drama is so widely different from the Greek or the Chinese, that it must be regarded, like them, as a spontaneous offspring of national genius.

MORALTIES AND MYSTERIES. The mystery plays of the middle ages were thought by some to have been first introduced by pilgrims returning from the holy land. They originated among, and were probably first performed by, ecclesiastics. However serious and solemn the events which were represented in these singular compositions, there were unvariably, in the later mysteries, two characters introduced to make sport for the multitude: namely, the Devil and Vice—a personage dressed in a long jerkin, a cap with ass's ears, and a dagger of lath. He is now best remembered by the illusions to his character and office in the plays of Shakespeare.

Miracle, or miracle plays, were a species of mystery. They are said to have represented the martyrdom of saints. In the 16th century the mysteries were succeeded by moralities, which were much in vogue about the time when the reformation made its chief progress in England. The characters in moralities were allegorical personages. Several of these performances, some by no means destitute of poetical merit, remain to us. They may be considered as the last step in the progress made by the dramatic art in modern Europe, before it reached the station and character which it has ever since retained.

The first biblical play on record is on Moses, and was

the work of a Jew named Ezekiel, in the second century. The second is a Greek tragedy on the Passion by Gregory Nazianzen. Religious plays were at an early time introduced into convents, and eagerly welcomed as breaking the monotony of convent life. A German abbess named Hroswitha composed some dramas of this kind in the 10th century.

THE PASSION PLAY AT OBERAMMERGAU. In our day the religious drama is practically confined to the Passion play as performed at Oberammergau, in Bavaria, which attracts once every ten years the largest and most attentive audience ever gathered within the walls of the theatre. The play is acted in fulfilment of a solemn vow made by the villagers in 1633, that if God would stay the pestilence then raging among them, they would perform the Passion tragedy in token of thanksgiving every tenth year. In its present form the sacred drama was prepared by Father Daisenberger, for thirty years the parish priest.

THE BOOK OF JOB. The belief of many scholars is that the Book of Job is a great dramatic poem, built on a basis of historical tradition. Some critics made it anterior to Moses, others, among whom are many of the Talmudical authorities, regard Moses himself as the author; while others attribute the work to the age of Solomon, when Hebrew poetry was in its full bloom. The book condemns the notion that there is a necessary connection between sin and suffering, and without explaining the cause of the latter in the case of a good man, displays the most sublime trust in the wisdom of the divine providence. It exhibits a noble spirituality; and in several places the mysterious contradictions of life seem to awaken in the soul of the writer thoughts of another life beyond the grave, in which God will vindicate the righteousness of His ways. As a work of genius and art, it occupies well nigh the first rank in

Hebrew literature, and is unsurpassed in sublimity of imaginative thought by any poem of antiquity.

THE FIVE GREAT DRAMAS. The five great dramas of the world are: "The Book of Job," unrivalled in imaginative thought by any poem of antiquity; the great play "Prometheus," by Aeschylus; Hamlet, by Shakespeare, the greatest of the English dramatic poets; "The Magic Wonder Worker," by Calveran, the famous Spanish dramatist; and "Faust," by Goethe. Each of these dramas represent the highest and the newest conception of the spiritual belief of their times. "The Book of Job" reveals to us the triumph of character over circumstance; Hamlet portrays the ideal pessimist against all conditions; "The Magic Wonder Worker" displays the triumph of the spirit over the Devil; Faust shows us the evolution of the soul through the sins of the flesh.